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# An Address ON GLYCOSURIA.

*Delivered at a Meeting of the Leeds and West Riding Medico-Chirurgical Society on Jan. 30th, 1914,*

BY W. HALE WHITE, M.D. LOND., F.R.C.P. LOND.,
SENIOR PHYSICIAN TO GUY'S HOSPITAL.

MR. PRESIDENT AND GENTLEMEN.—In this country Fehling's test for glycosuria is the one most used, but the Rochelle salt and the copper solutions should be mixed just before use; if kept mixed for weeks a brick-red precipitate often appears on boiling when no sugar is present. I have known forgetfulness of this lead to disastrous results. It is common to see medical reports of life insurance cases which state that the proposer has a trace of sugar in his urine, but is otherwise perfectly healthy. I hope we shall hear how many of such cases become diabetic. No doubt in several the reducing agent is not dextrose. It is often glycuronic acid, which has nothing to do with glycosuria, often uric acid or urates; it may be other sugars—e.g., maltose or arabinose, a pentose, the excretion of which indicates no serious disease; nevertheless, those passing it have been thought to have diabetes and have consequently been subjected to irksome and unnecessary dietetic treatment, and a suckling woman passing lactose in her urine has been said to have diabetes. Perhaps in some very few cases small quantities of dextrose may be detected because the proposer has taken sugar in excess of what is for him the normal limit of tolerance, which is that most healthy people can take about 150 grammes on an empty stomach without causing glycosuria. We want information as to whether there may not be persons whose dextrose tolerance is lower than that usually stated to be normal. I suspect there are. At any rate, we know that minute amounts of dextrose are on ordinary diet contained in the blood and excreted in the urine, although the one gramme a day excreted in healthy urine is not enough to reduce Fehling's solution. But pregnancy can hardly be considered abnormal, yet it may be accompanied, not only by the excretion of lactose, but by the passage in the urine of dextrose detectable by Fehling's solution even when the woman is on ordinary diet. We know that the thyroid hypertrophies in pregnancy and that glycosuria occasionally appears in exophthalmic goitre. Perhaps the glycosuria of pregnancy is due to this hypertrophy of the thyroid. Perhaps, too, the hypertrophy of the pituitary, which also takes place in pregnancy, is one cause of the glycosuria; however, we must remember that it is chiefly the anterior lobe of the pituitary which enlarges, but it is extract of the posterior lobe injection of which causes glycosuria; still considering the propinquity of the two lobes it is quite possible that enlargement of the anterior lobe stimulates the epithelial cells—called pars intermedia—which form the covering of the posterior lobe, and the colloid secretion of which lowers the tolerance for sugar.

It is often stated that in man glycosuria means hyperglycæmia. Certainly this is almost always true, but there are a few persons who excrete 1–5 grammes of sugar a day who have not hyperglycæmia nor any symptoms of diabetes. They may be suspected when it is observed that restricting the carbohydrate intake does not do away with the glycosuria. It has been suggested that this variety of glycosuria is allied to that caused by phloridzin, there being some body in the blood which increases the permeability of the renal cells to dextrose. This mild glycosuria appears to be of no clinical significance. Perhaps some life insurance examples of a trace of sugar are instances in point.

Each apparently healthy person whose urine gives a slight or suspicious reduction with the copper test should be (1) questioned as to the amount of sugar recently taken; (2) questioned as to any drugs taken; (3) examined to see if any disease or condition known to lower sugar tolerance is present—e.g., pregnancy or exophthalmic goitre; (4) it should be observed whether taking less carbohydrate controls the glycosuria; and (5) he should have the same specimen of urine examined by the fermentation and phenylhydrazine tests, for by these all reducing bodies except dextrose and lævulose can be excluded, and the separation of these two is not necessary for the diagnosis of diabetes, in which both may be passed. It must be the same specimen because probably in the early stages of diabetes sugar is not constantly present in the urine. Much hardship is often done to these proposers by the mere unconfirmed statement, "A trace of sugar," for as long as that statement is uncorrected the head office cannot accept the proposal at ordinary rates. When the proposer has once passed sugar and the examiner finds the urine free from it he must ascertain what diet the proposer is taking.

## SOME DISEASES WHICH MAY BE ACCOMPANIED BY GLYCOSURIA.

We will now briefly consider some diseases which may be accompanied by glycosuria.

### *Exophthalmic Goitre.*

Firstly, there is exophthalmic goitre. The frequency of glycosuria cannot be stated, for unless the urine of many cases were examined daily slight examples would be missed. The glycosuria may pass away as the exophthalmic goitre gets better. For example, a girl, aged 21, had exophthalmos, tachycardia, large thyroid, tremor, and diarrhœa. Six months later glycosuria appeared; soon after this she began to improve, the glycosuria persisted two years, but by the time it left her she was so well that she could walk eight miles. Seen 12 years later, she said she had been perfectly healthy all this time; there was no glycosuria. On the other hand, I know of three cases of exophthalmic goitre that have died from diabetes. 1. A man, aged 40, had exophthalmic goitre for years, but glycosuria was only noticed 12 months before I saw him; during all this time it persisted, although the exophthalmic goitre improved, so that now hardly any evidence of it could be found; he died from diabetic coma a few days after I saw him. 2. A woman, aged 31, had a large thyroid, great tremor and tachycardia, and some exophthalmos; she improved greatly under rest; eyes and thyroid became almost normal. Eight years after I first saw her she was found to have diabetes, from which she died in two months. 3. A woman, aged 41, known to have had diabetes and slight exophthalmic goitre for eight years, was admitted into the hospital and died soon after in diabetic coma. We learn from these cases that sufferers from exophthalmic goitre ma-

die of diabetic coma, and the strange fact that the glycosuria may appear, continue and even end in diabetic coma although the exophthalmic goitre is improving and the thyroid has become of almost normal size. Medicinal administration of thyroid may cause glycosuria, and I see no reason why it should not lead to diabetes, although I know no case in point. Anyhow, it is desirable when sufferers from myxœdema are taking thyroid regularly to test the urine from time to time and to limit the doses of thyroid so that glycosuria does not appear. As might be expected, sufferers from myxœdema have a high sugar tolerance, but a few cases have been recorded of glycosuria associated with myxœdema, but in some at least there is doubt as to the correctness of the diagnosis. There is no evidence as to how the thyroid lowers the tolerance for sugar so as to lead to glycosuria; it has been suggested that it acts through the pancreas.

*Diseases of the Pituitary Body.*

Secondly, we have pituitary glycosuria. As described above, the colloid secretion of the pituitary which passes into the general circulation, in some animals at least, going first straight into the cerebro-spinal fluid, excites glycosuria by lowering sugar tolerance; hence when, as in acromegaly, we have enlargement of the anterior lobe of the pituitary body, this by its pressure on the colloid secreting cells excites them and so leads to an over-production of their secretion with a low glucose tolerance, consequent glycosuria, and in a severe case diabetes; but acromegaly being rare, this variety of glycosuria is not of the same clinical importance as that of exophthalmic goitre. It is of interest that the pars intermedia of the pituitary and the thyroid have the same structure; both secrete colloid material, and an over-secretion of either lowers sugar tolerance and causes glycosuria; on the other hand, the destruction of either, as in myxœdema and hypopituitarism, causes an increased sugar tolerance. If pituitary extract were employed therapeutically for long periods we should expect to meet with glycosuria as a result. In some animals it has followed the injection of pituitary extract.

*Diseases of the Adrenals.*

Thirdly, it is well known that adrenalin, which is constantly being poured into the blood from the adrenal medulla, tends to lower glucose tolerance, and the same is probably true of the secretion from all the chromaffin tissues of the body. As far as I know there is no certain instance in clinical medicine of glycosuria due to increased secretion of adrenalin; but it is given with great success in asthma, and it behoves us occasionally to test the urine of those taking it, for it may possibly lead to glycosuria. Some think that as age advances all the chromaffin tissues become more active, and by this explain the high-tension pulse often seen in persons well past middle life. Garrod suggests that some examples of the mild glycosuria of elderly people are due to the same cause.

*Diseases of the Organs of Generation.*

Fourthly, glycosuria has been observed in disease of the female organs of generation—e.g., ovarian tumours—and it has disappeared when the surgeon has removed the tumour. Probably here we have the effect of an internal secretion.

*Diseases of the Pancreas and Parathyroids.*

Fifthly, whilst in the instances just mentioned we have to do with internal secretions which provoke glycosuria; that of the pancreas restrains it, hence when this is almost or completely destroyed glycosuria and diabetes appear. I find that in 14 consecutive years at Guy's Hospital there were 6708 post-mortem examinations, and that the pancreas was to the naked eye diseased in 142 of these, or in about 2 per cent. of all persons dying in a large general hospital. It was called atrophic or small in 19 cases; 16 of these had diabetes, and a quarter of all the patients dying from diabetes in Guy's Hospital have a small atrophic pancreas. Other pancreatic diseases will cause it, but they must destroy most of the gland. On the other hand, patients may die from diabetes and yet the pancreas may appear perfectly healthy even after histological examination; perhaps these cases are dependent upon disease of other organs influencing sugar tolerance. It is very difficult to diagnose chronic pancreatitis in any case of diabetes, but there is an impression, probably correct, that it is more likely to be found if the diabetes is severe. Lately it has been suggested that cholangitis, usually the variety associated with gall-stones, may cause glycosuria because the cholangitis by spread of inflammation leads to chronic pancreatitis, and cases have been recorded in which glycosuria has disappeared after the gall-bladder has been drained. But the figures taken from the post-mortem room at Guy's Hospital do not afford much evidence of a causative relation between gall-stones and diabetes. I find that in the post-mortem room among 15,000 consecutive post-mortem examinations gall-stones were found in 476, or once in every 32 deaths; 121 of the 15,000 died from diabetes, so that on the theory of chance 4 of these should have had gall-stones, while as a matter of fact 11 had, but the difference between 4 and 11 is not enough to be very convincing—that between 40 and 110 would have been much more so—especially as many of the diabetics died before the age at which gall-stones are likely, for Pavy found that among hospital patients the usual age of death from diabetes was between 15 and 40, but the age of nearly all the sufferers from gall-stones exceeds 40. Further, that gall-stones have much influence in the production of diabetes is unlikely, for they are much commoner in women than in men, but diabetes is three times as common in men as among women. It has been suggested that the chronic pancreatitis associated with diabetes may be due to inflammation of the duodenum spreading up the pancreatic duct and sometimes to arterio-sclerosis, but I have already mentioned the suggestion that an excess of adrenalin causes both glycosuria and high blood pressure. The parathyroids have, on experimental evidence, been shown to have the same relationship to glycosuria as the pancreas, for excision of them in dogs causes it, but as far as we can tell this fact has no application in medicine.

*Diseases of the Nervous System.*

Sixthly, it has been known for a long while that various disorders of the nervous system will cause glycosuria; indeed, rather over 30 years ago it was urged by some that diabetes was a disease of the nervous system. Instances in which it has followed shock and mental emotion are on record, and it has been shown by Cannon and others that glycosuria appears in cats if they are frightened by a dog. Glycosuria has been found in association with meningitis, cerebral tumours, and other organic nervous diseases. It may, if carefully sought, often be found after severe concussion. But most of these nervous varieties of glycosuria

are clinically unimportant, for either the nervous lesion soon kills or the glycosuria is slight and transient. We know nothing for certain as to its mode of production in man, but, because the secretion of adrenalin is under the control of the splanchnics, it has naturally been suggested that nervous glycosuria is really adrenalin glycosuria, and for this there is strong experimental evidence; or that, as the cervical sympathetic sends fibres to the pituitary and excision of the superior cervical ganglion leads to glycosuria, all nervous glycosuria is really pituitary glycosuria; or it has been thought to be due to influences reaching the liver through the nervous system and leading to a rapid transformation of glycogen into sugar.

*Diseases of the Liver.*

Seventhly, considering the importance of the liver as a storehouse for glycogen, it is strange at first sight that diabetes is a rare complication of organic hepatic disease, so rare that it is open to question whether there is an association of any importance. Perhaps this is because for hepatic disorder to cause diabetes we should require an exaggeration of hepatic function like the exaggeration of thyroid function seen in exophthalmic goitre, and then, too, there are, besides the liver, other stores for glycogen which must quickly compensate for any deficiency of its glycogenic function, for in many hepatic disorders the hepatic glycogen is almost absent—e.g., after obstruction to the hepatic duct Bernard's puncture will not lead to glycosuria. It is true that glycosuria has been occasionally recorded in cirrhosis, acute yellow atrophy, phosphorus poisoning, and other hepatic disorders, but whether in such cases it is disorder of the function of the liver which leads to the glycosuria is not proved. Although if the liver is diseased giving dextrose rarely leads to glycosuria, giving lævulose often does, a fact which some authors say may help in the diagnosis of hepatic disorders, but others deny this. It is only fair to state that some, especially the French school, consider that many examples of glycosuria, especially those of the mild variety seen in middle-aged or elderly people who are obese and overeat, are due to a disordered hepatic function in virtue of which sugar that should be retained as glycogen is poured into the blood, and they urge that the liver is probably the cause of the hyperglycæmia, for it is often enlarged. That it is enlarged is certainly true, for these persons often have a fatty liver, but whether this should be regarded as the cause of the glycosuria is doubtful. On proper dieting the liver becomes smaller and the sugar disappears from the urine. It has been suggested that some forms of glycosuria may be of intestinal origin, but we have no clinical evidence of this.

I have briefly reviewed the causes of glycosuria and we have seen that (1) the pancreas, and probably to a far less extent the parathyroids, by their internal secretion tend to the lessening of sugar in the urine; and (2) the thyroid, pituitary, suprarenal bodies, and possibly some of the organs of generation, by their internal secretion, to its increase. Whether all these organs maintain the normal balance by acting on each other, or by acting directly on the liver or on other parts of the body which produce sugar, is not known. Some at least of the processes causing glycosuria are under the control of the nervous system. In most cases of glycosuria it is impossible to say that any of these internal secreting organs or the nervous system or the liver are structurally diseased, and there may be causes of glycosuria of which at present we are unaware.

CAUSATION OF HYPERGLYCÆMIA.

Hyperglycæmia must be due to either (1) a diminished destruction by the tissues of the sugar in the blood, or (2) an increased pouring of sugar into the blood. Experiments on animals, although often difficult to interpret, are considered by many to show that when a dog has hyperglycæmia as a result of excision of the pancreas this is due to a failure of the tissues to utilise sugar owing to the absence of a pancreatic hormone which acts as an amboceptor. Others believe that hyperglycæmia is not due to a failure of the tissues to utilise sugar but to an overproduction, and it is probable that this is the cause of hyperglycæmia in most cases of human glycosuria. The ease with which in man mild examples can be controlled by diminishing the carbohydrate intake, the fact that we know that in severe cases some of the sugar in the urine comes from the protein tissues, and the fact that although the muscles are the chief users of sugar, yet diseases such as progressive muscular atrophy, muscular dystrophy, anorexia nervosa, and cancer, in which the muscular wasting is so extreme that it is difficult to imagine that the muscles are not failing to use their usual food, are not accompanied by glycosuria, all point to this conclusion. In mild cases the sugar in the blood is due to a lowered sugar tolerance—in other words, the hyperglycæmia is due to what is for that person an excess in the food. But, as is well known, in a severe case of diabetes the sugar excreted in the urine is far in excess of that taken in the food, and we believe that in such an instance the sugar is derived from the imperfect metabolism of proteins and to much less extent of fats. Most clinical observers are of opinion that the so-called alimentary glycosuria—i.e., mere lowering of the sugar tolerance—is an early stage of diabetes in which, if the patient lives long enough, later sugar will be formed from proteins and fats, or, in other words, a simple excess of sugar in the blood appears to have a very deleterious effect in so upsetting the metabolism of proteins and fats as ultimately to lead to a still greater hyperglycæmia and kill the patient. It is universally agreed that, within limits, it is wise, by dieting, to decrease the glycosuria in even severe diabetes, which again seems to indicate that in some way the mere presence of sugar in the blood is harmful. This is equally difficult to understand whether or not we believe hyperglycæmia to be due to an impaired utilisation of dextrose by the tissues, and even if this view be true it is clear that in a severe case other causes—e.g., protein metabolism—are producing an excess of sugar in the blood, and we have this extraordinary state of affairs, more sugar in the blood because the tissues cannot use it, followed by still more from proteins and fats. We should have expected that if the body was deficient in energy because the sugar in the blood was not burnt up, that was the very reason why other metabolic processes should be carried out as completely as possible. Another strange thing is that in the young the progress of diabetes towards death is rapid as compared with the progress in those over 60, in whom it is often easy to treat, so that it is difficult to avoid the belief that the perverse chemistry must differ considerably at different ages; indeed, the only form of diabetes in the human

subject which even resembles that which follows removal of the greater part of the pancreas in dogs is the rapid case which we see in children or young adults, and then the resemblance is often so close that we may assume that the conditions are the same. The high incidence of diabetes in Jews, its varying incidence in different nations, its comparative rarity in women, its different progress at different ages, the way in which different diabetics utilise different sugars, all point to considerable variation in the behaviour of the body to carbohydrates. This is also seen experimentally, for if small amounts of lævulose are given to a dog whose pancreas has so far been destroyed that it cannot utilise any dextrose given by the mouth, only a little dextrose is excreted in the urine, and the greater part of the lævulose is utilised; this fact is sometimes of use in treatment. As cane sugar is in the body converted into dextrose and lævulose a diabetic may sometimes get energy out of cane sugar when he could not out of dextrose. The more we reflect, the more we are driven to the conclusion that sugar in the urine is the result of several different disorders which we cannot with our present knowledge separate from each other. It is sometimes urged that neurogenous diabetes is different from other varieties, but that not only may the sugar tolerance be under the influence of the nervous system, but also the diabetic abnormal metabolism of fats and proteins is shown by the well-known fact that excitement, worry, or shock will hasten diabetic coma.

### ACIDOSIS.

The perverted metabolism of proteins and fats, which in a severe case of diabetes is the cause of a great part of the glycosuria, results in the circulation in the blood of oxybutyric acid, diacetic acid, and other acetone bodies derived principally from fats, they are excreted in the urine, and diacetic acid is easily recognised there by the ferric chloride reaction. Generally speaking, the presence of this reaction in a strong degree indicates a serious outlook. Oxybutyric acid and diacetic acid are met with in the urine in many conditions—e.g., starvation, severe vomiting, and after anæsthetics—and when they are present the patients often have dyspnœa without lividity, indistinguishable from the dyspnœa often seen in severe diabetes. It is believed that this is due in both cases to the stimulation of the respiratory centre by the increased acidity of the blood, just as it is normally stimulated by $CO_2$ and by lactic acid after severe exercise. Further, the dyspnœa of heart or renal disease when there is no lividity and the dyspnœa of high altitudes are believed also to be due to an increased acidity of the blood. All these forms of dyspnœa are therefore due to acidosis. Recently it has been shown by several observers that in diabetic coma, in which this form of dyspnœa is very striking, the alveolar air contains much less $CO_2$ than normal. Dr. E. P. Poulton, formerly my house physician, now medical registrar at Guy's Hospital, has shown by many observations, which will shortly be published, that this diminution of $CO_2$ in the alveolar air precedes the onset of coma and may be used to foretell it. He has devised a simple apparatus by which the alveolar $CO_2$ can be easily estimated. This is therefore an additional means of clinically telling when coma is imminent. The suggested explanation is that the increased acidity of the blood excites the respiratory centre to great activity, and in consequence of this increased pulmonary ventilation the $CO_2$ is got rid of rapidly. We must allow that the abnormal acids of the blood cause the dyspnœa of diabetics, but whether they produce the fatal coma itself is doubtful. Coma is far commoner in diabetes than in other varieties of acidosis; giving enormous quantities of alkalies quite fails to save most cases of diabetic coma. Oxybutyric acid itself is not a coma-producing poison, and as Beddard says, coma is not seen in scurvy in which the alkalinity of the blood is much diminished. All we can say is that the cause of diabetic coma is unknown, but it is bound up with a condition of acidosis. We should never forget it is liable to be produced by suddenly withdrawing carbohydrates from the food.

### TREATMENT.

Turning now to the treatment of glycosuria. The influence of the nervous system is well exemplified in the benefit that follows a tranquil life. A moderate amount of work without any anxieties, excitements, or worries suits best. I know a busy medical man who suffers from glycosuria which always disappears when he takes a restful holiday, although he does not alter his diet. The bad influence of excitement is seen not only in its effect on the sugar, but it is well known that it will induce coma. A long journey to see a celebrated physician brought on coma fatal in the physician's house. Although, unless the patient is very weak, some mental and muscular work is desirable in order to maintain the general health, yet both must always stop far short of fatigue, for he is losing much energy in the unoxidised sugar passed in the urine, and if the fault is that his muscular metabolism is disordered so that the muscles are not able to utilise the sugar brought to them it is easy to believe that it cannot be a good thing to make them do much work. It is clear that early hours and a country life are better than a town life, and, bearing in mind the liability of diabetics to tubercle, plenty of fresh air is desirable.

#### *Mild Glycosuria.*

The least serious variety is that in which the patient is over 60 and passes a little dextrose and no diacetic acid in his urine. Such a person, who often overeats, is probably only an example of the fact that while in the young sugar tolerance is high—as seen in the large amount of carbohydrate in comparison to their weight that children can eat—in elderly people it falls, although there are many adults who have an excessive craving for carbohydrates almost as strong as that which some have for alcohol. Usually this mild glycosuria is easily controlled by diminishing the sugar consumed, but it may be necessary to take less starch also. It might be urged that such a patient was only, so to speak, wasting the sugar that passes out, and therefore the intake need not be diminished, but, as we have seen, all clinical experience points to the fact that the long continuance of hyperglycæmia due to excessive intake of sugar may lead later to profound metabolic disorders shown by the presence of sugar in the blood derived chiefly from the proteins and to a less extent from the fats of the body and oxybutyric acid and diacetic acid from the fats.

#### *Treatment of More Advanced Cases.*

Supposing the illness to be more advanced than in the slight case we have considered, the patient should take his ordinary diet and have the total sugar in the urine estimated daily for the first three days of observation. We thus get the average daily sugar output on ordinary diet. Then

the carbohydrate in the food should be slowly diminished, and unless the case is severe we shall reach a point at which no sugar appears in the urine: often this is not attained until all, or almost all, carbohydrates have been taken out of the diet. Patients frequently fail to take enough fats and proteins to make up for the loss of carbohydrates. Fats such as butter, bacon, fat ham, cream, and olive oil should be consumed in abundance if they can be digested, for they have double the energy yield of proteins. Some think that part of the sugar in the blood in diabetics may come from proteins of the food, but this is not a serious source of sugar in a moderate case, and proteins should be taken. The loss of bread is so keenly felt that proteins are usually taken partly in the form of diabetic breads and biscuits. It should be remembered that all these contain some carbohydrate, but with the best varieties it is very little, and none should be used that contain more than 5 per cent. Every medical man should occasionally have analysed any diabetic foods his patients are using, for there are on the market from time to time preparations sold for diabetics containing mischievous amounts of starch. Patients vary much in their ability to eat these diabetic foods; none are really nice, but many varieties are sold, and usually the patient can take one or the other, especially if plenty of butter is used, or if all are still repugnant some of the diabetic jams or marmalades which contain no sugar and are sweetened with saccharine may be used to render them palatable. If it is desired not to allow any milk because of the lactose in it, one of the sugar-free milks in the market or washed cream mixed with albumin water made from white of egg may be given. Alcohol, being a food which entails no digestion, may be allowed, but, of course, not in a form which contains sugar; good whisky and water is as suitable as anything. When the patient has reached the diet on which no sugar is passed he should be kept on it for two or three weeks according to the severity of the case. Generally by then his sugar tolerance will be improved so that gradually some sugar may be added to his diet without causing glycosuria. I usually begin with lævulose, because many, but not all, diabetics bear this better than dextrose; a weighed quantity of either the solid or liquid form may be stirred up in tea. I have given dahlia tubers, for their starch is inulin, which is converted into lævulose. They may be steamed like potatoes, but not many patients like them, although they were a fashionable vegetable in France before the Revolution. Soya beans, too, ground into a flour may be tried, for they contain less carbohydrate and more fat than almost any vegetable. Some patients can take fair quantities of skim milk without increasing glycosuria (hence the milk cure), others can take oatmeal (hence the oatmeal cure), others potatoes (hence the potato cure). Boiled oatmeal only contains 11 per cent. and potatoes only 18 per cent. of carbohydrate. If small quantities of any of these can be given without increasing glycosuria a little ordinary bread may next be tried, for patients bitterly feel the loss of their bread. The medical man must crush the belief the public have that toast is allowable for diabetics. It contains a little more starch than bread, and, like bread, may only be given in such small quantities as not to lead to increased glycosuria. When we have found the daily maximum number of grammes of whatever carbohydrate the patient can best take without increasing glycosuria, we may allow him in addition to his diabetic diet just under this number of grammes of that carbohydrate.

### *Severe Cases.*

In many instances we find it impossible by reducing the carbohydrate in the food to cause the complete disappearance of sugar from the urine, for some of it is derived from proteins and some from fats. Then it is best, after slowly reducing his carbohydrate, to keep the patient for a time on such a diet that further diminution of the carbohydrate in the food does not lead to further lessening of the glycosuria. If this is done for some weeks it will often be found that the patient can then take, without increasing his glycosuria, additional carbohydrate, as, for example, oatmeal, which we have seen diabetics may bear well; if so, this will all be to his advantage. Such a case demands an estimation of the nitrogen excretion and a knowledge of the nitrogenous intake—indeed, as a matter of interest this is desirable for most cases except the mildest—as part of the sugar comes from protein both of the tissues and the food. The amount of sugar that may be derived from protein is obtained by multiplying the number of grammes of nitrogen in the urine by, according to some the figure 5, according to others 3·5. It is useful, in order to watch the progress of a case, to divide the grammes of sugar in each 24 hours' urine by the grammes of carbohydrate in food + possible grammes of sugar from protein. To avoid fractions it is customary to multiply by 100. The result, called the coefficient of the excretion of dextrose, gives an indication of the progress of the case. The lower it is the better for the patient.

If the presence of a large amount of diacetic acid or any other reason makes us apprehensive of coma we must go very carefully in the reduction of carbohydrates, for reduction, especially if extreme or sudden, is very prone to lead to coma; indeed, as is well known, coma is often heralded by a spontaneous drop in the sugar in the urine, and then giving the patient sugar does not bring him out of the coma. In a severe case it is bad treatment to try and get rid entirely of the sugar from the urine. In milder cases the patient may sometimes be cut entirely off food for from one to three days for a time (Guelpa treatment), being allowed, however, water and tea to drink; this often facilitates considerably the disappearance of sugar from the urine. Hence in some "cures" the patients have starvation days from time to time, but of course we must be on the alert for signs of acidosis.

It is clear that to treat properly cases of glycosuria which are not mild attention must be paid to many details. The whole 24 hours' urine must frequently be saved, the sugar and nitrogen in it quantitatively estimated accurately, the carbohydrates and proteins allowed must be weighed, experiments must be made to see which variety of carbohydrate the patient can deal with best; it is well also to know the caloric value of his daily diet, and the patient should be carefully weighed every week. All this is very difficult to carry out in the patient's own private house. Some patients are so ill that they ought to go into a hospital or nursing home where these observations can be made; but a great many are not sufficiently ill for this, nor is it desirable, for they should be up and ought to be a good deal in the open air taking exercise.

For them some home or institution in the country at which the urinary analyses and experiments with different foods could be properly made is highly desirable. Such an institution should have a medical officer who is a skilled analyst and is specially interested in and competent to deal with dietetic problems, and should make a particular point of the preparation of meals for diabetics. A patient would stay at such a place until it had been found which diet most satisfactorily controlled his glycosuria, for again it is worth while to remind you that different diabetic patients deal differently with the various varieties of carbohydrates, and in many instances carbohydrates should not be entirely withheld. When the diet had been found which suited the patient best, then he could return to his home and his medical attendant with detailed instructions as to how he should live. The mild cases in elderly people which are unaccompanied by any oxybutyric acid, and in which the little sugar that is passed is easily controlled by diet, need hardly go to an institution; they can be treated at home. As might be suspected, the patient with a comfortable income and ample leisure does best. The treatment of poor patients suffering from diabetes is very unsatisfactory, for although we may do them much good in the hospital, yet when they get outside it is almost impossible for them to afford diabetic foods, and many of them would not eat them even if they were provided for them. When these poor people are away from the controlling influence of a medical man they sooner or later take unsuitable food, and they cannot lead the quiet and easy life that is so necessary.

### *The Use of Drugs.*

I have not said anything about drugs in the treatment of glycosuria, for they are of little importance in comparison with diet; patients vary much in the readiness with which they respond to drugs, and it is impossible to tell beforehand whether or not drugs will benefit. But opium and codeia certainly sometimes help to reduce the sugar in the urine, nor, as far as I know, does either ever become a habit with a diabetic, and although there is a strong tendency to become comatose, yet I have never seen opium poisoning in a patient with diabetes. Aspirin is reported to diminish glycosuria occasionally.

### *Coma.*

If a patient is in coma probably it is very rarely that we can save him, but as in such a condition the blood contains much oxybutyric acid, the attempt may be made to neutralise this by giving plenty of bicarbonate of soda. I usually give it in milk, for it is undesirable that these patients should not take any carbohydrate—in a bad case 80–100 grains may be added to each pint and the patient may drink three pints a day. Generally polyuria is present and so fluid is absorbed fast from the alimentary canal; therefore it is usually unnecessary to inject alkalies directly into a vein. If put under the skin they may cause sloughing; if for any reason they cannot be given by the mouth they may be given by the rectum. When, however, the patient is merely liable to occasional drowsiness, or coma seems likely either from the ease with which a ferric chloride reaction appears, or from the presence of sickness and abdominal pain, or because the case is very severe, or because the alveolar $CO_2$ is a little low, then much may be done to avert it by keeping the patient quiet both bodily and mentally, and by giving milk containing plenty of bicarbonate of soda. I have known patients who seemed liable to coma improve very much on such treatment and get well enough to leave the hospital. As excitement predisposes to coma bicarbonate is often desirable on admission to hospital or before an operation. Pyrexia may lead to an increase or to a diminution of the sugar. During an influenza epidemic a lady, not known to have diabetes, had fever, which was rightly thought to be due to influenza. After four days she became drowsy. The urine was tested; it contained no sugar, and so diabetic coma was excluded. The urine was not then tested with ferric chloride. The next morning she was comatose. The urine gave an abundant ferric chloride reaction, a minute trace of sugar was found in it, and the breath smelt of acetone. Here, no doubt, the pyrexia contributed to the disappearance of the sugar, but forgetfulness of the fact that absence of sugar may indicate the oncoming of coma prevented the testing for diacetic acid on the first occasion, and hence the correct diagnosis of influenza occurring in a diabetic subject was for a few hours overlooked.

I have already urged the probability that coma is only associated with and not directly due to acidosis and the extreme improbability of recovery from it. Still I remember the case of a young woman suffering from diabetes who was pregnant. Towards the end of pregnancy she became comatose. Cæsarean section was performed, the coma gradually passed away, and although still diabetic she was alive a year after the confinement and the child was well. She was able to have all the ease and comfort that money could buy.

### PROGNOSIS.

The main outlines of the prognosis are well defined, but there are many exceptions. The younger the patient the worse the prognosis; this is nearly always true, but I knew a child of about a year old live a year, and one of five who also had phthisis lived considerably over a year. At the other end of the scale we have the elderly man whose sugar is easily controlled by diet; usually he passes no diacetic acid; he nearly always does well. Indeed, it is highly probable that a number of elderly persons, men especially, have a little glycosuria, but they go to their grave without its ever having been suspected, and, as far as we know, without its ever having done them any harm. Between the extremes of childhood and people who have passed the fifth decade, the younger they are the worse the outlook; it is especially bad if they have wasted rapidly, if they have much diacetic acid, if they are often drowsy, if they have complications—e.g., phthisis,—if they have an extreme degree of lipæmia—as, for example, when it may be seen in the retinal arteries,—or if they must work hard for their living; but in most cases it is impossible to give an opinion until the effect of treatment is seen. I know persons who are alive and in fair health, although they have had diabetes for 20 years and whose urine always contains some sugar and often a little diacetic acid, but then they have always been very careful to carry out the treatment ordered.

### CONCLUSION.

The time that should be taken by the opener of a debate has come to an end. I must ask your forgiveness for the incompleteness of what I have

said, but I would plead as an excuse not only my own imperfections but also the extent and difficulty of the subject. About 50 years ago Sir William Gull asked: "What sin Pavy or his fathers before him had committed that he should be condemned to spend his whole life seeking the cure of an incurable disease?" Pavy, with steadiness of purpose, probably unmatched, worked at the subject from the age of 23 till after his eighty-second birthday, but neither he nor the many hundreds of others who have tried to unravel it have yet succeeded in fully explaining why sugar is sometimes found in urine, nor have they discovered how to cure diabetes.

ON THE

# TREATMENT OF FRACTURES OF THE EXTERNAL MALLEOLUS.

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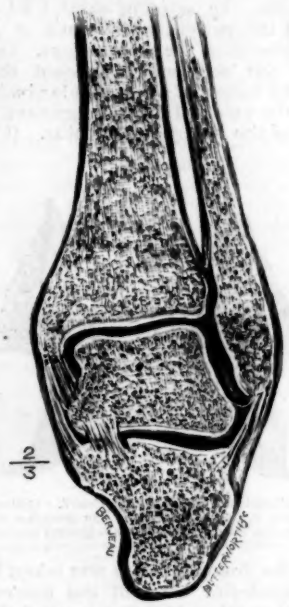
BEFORE the discovery of X rays fractures of the external malleolus were not always easy to detect, and, as a rule of thumb method, a fracture of the lower end of the fibula was loosely, and often erroneously, entered in the hospital reports as Pott's fracture. The increased accuracy in the diagnosis of broken bones due to radiography has convinced many that Pott's fracture is an uncommon accident, especially if the term be reserved for the lesion as described by Percivall Pott:—Fracture of the fibula about three inches above the ankle, rupture of the internal lateral ligamemt, and eversion of the foot.

The fractures which occur at the lower end of the tibia and fibula, quaintly termed in French *cou-de-pied*, have been carefully studied by Quénu (1907), Chaput (1908), Meissner (1909), and Colvin (1914).[1] The common injury to the bones in this situation is fracture of both malleoli; it happens in nearly half of the cases, and fracture of the external malleolus, or of the fibula above the joint, in a quarter of the cases. Text-books of surgery scarcely mention fractures of the malleoli. In classifying fractures of the external malleolus I think the adjective malleolar should be limited to fractures which lie at, or below, the level of the interosseous ligament (inferior tibio-fibular). The mode of treatment advocated in this article should be limited to fractures of the external malleolus; such fractures are not difficult to treat, but they often lead to great impairment of movement at the ankle-joint. The relation of the malleolus to the joint (Fig. 1) explains this; when the tip of the malleolus is broken the articular surface on its inner surface is undamaged; but when the malleolus is broken across its middle the fracture opens the joint, and the callus thrown out for the repair of the injury impairs the movements of the joint. The chronic inflammation attendant on such a fracture leaves the patient with a stiff and often painful joint. A compound fracture of the external malleolus has led to acute septic arthritis, ending in amputation of the leg and occasionally in death.

Fractures of the external malleolus are sometimes troublesome to treat, for it is difficult to keep the small fragment in position; moreover, it is not an easy matter to adjust one of these fractures with wire or screw when the detached piece of bone is small.

In dealing with fractures involving joints, especially when a small piece is detached, I occasionally remove the broken fragment. I have on several occasions dissected out a broken styloid process of the radius without impairing the utility of the wrist-joint. On three occasions I have excised the hemispherical portion of the head of the humerus when it has been broken off by direct injury and displaced. In one case in which the cartilage-clad portion of the head of the humerus was broken off, in an elderly lady who was run over by a cab, the disc-shaped fragment was forced through the great scapular notch into the infrascapular fossa, lying therefore on the dorsal aspect of the scapula. These operations were followed by quick recovery and a useful limb. Small detached portions of the articular end of the humerus are not only extremely awkward to fix with wire, but difficult to keep in position by any method of splinting. Excision of such small detached fragments of the humerus is safe, simple, and leaves a very satisfactory joint. The excision of small fragments of bone involving articular surfaces gives such good results in the shoulder, elbow, and wrist-joints, that I determined to try it in cases of fracture of the external malleolus.

FIG. 1.




A section through the ankle-joint to show the relation of the external malleolus to the joint.

CASE 1.—A tall, stout woman, aged 58 and weighing 154 lb., tripped on a stone, August, 1910, and broke the right external malleolus. The leg was fixed on a back and two side splints under an anæsthetic. A week later a skiagram showed that the fragments were not in good position; this induced me to remove both fragments, and at the

[1] Chaput: Les Fractures Malléolaires du Cou-de-pied et les Accidents du Travail, Paris, 1908. Colvin, A. R.: Fractures of the Lower Ends of the Tibia and Fibula, Surgery, Gynæcology, and Obstetrics, January, 1914, p. 99. Meissner: Beiträge zur Kenntniss der Malleolen Frakturen, Beiträge zur Klinischen Chirurgie, 1909, Band lxvii., p. 78. Quénu, E.: Du Diastasis de l'Articulation Tibio-péronière Inférieure, Revue de Chirurgie, 1907, vol. xxxv., p. 897.

operation I found an oblique fracture carrying away the anterior third of the malleolus by a vertical split. The piece of bone thus detached was broken in two transversely, but the articular facet on the inner aspect of the malleolus was undamaged. The fragments of bone were removed without difficulty; the wound quickly healed, and for some months the patient walked with a limp, due, she said, to nervousness, not to pain. A year later she walked easily and without a limp.

The following is a better example of the usefulness of the operation:—

CASE 2.—A Frenchwoman, aged 40, fell on the pavement in consequence of slipping on a piece of peel and was conveyed to the Middlesex Hospital in March, 1912. The left ankle was swollen, and there was much bruising behind both malleoli. A skiagram showed an oblique fracture of the fibula involving the malleolus. In spite of careful adjustment of the splints the patient complained of great pain, and this continued for several days. On the tenth day after the accident I exposed the external malleolus by means of a rectangular incision; after detaching the external lateral ligament I removed the whole of the external malleolus. (Fig. 2.) In

FIG. 2.

The external malleolus removed from Case 2. (Natural size.) A, external; B, internal surface. The posterior fasciculus of the external lateral ligament (talo-fibular) is shown on B.

removing the fragment care was taken in dividing the thick posterior band of the external lateral ligament to avoid cutting or tearing the tendons of the peroneal muscles, which lie in a deep groove on the posterior border of the malleolus. The foot was fixed at a right angle to the leg and adjusted on a back splint. Next day the patient was comfortable and free from pain. In ten days the wound healed; on the twelfth day she could stand on the foot without pain, and on the fifteenth day went to a convalescent home. Three months later the patient reported herself at the hospital; she could walk and move about on the injured foot easily, safely, and without pain or stiffness.

CASE 3.—A widow, aged 45, slipped whilst going downstairs. Four days later she was admitted into the hospital, and an X ray examination showed an oblique fracture of the fibula immediately above the malleolus. Four days after her admission the lower fragment was excised as described in the preceding case. The piece of bone removed was exactly like the fragment represented in Fig. 2. The wound healed soundly in spite of the tissues containing much extravasated blood. The patient was kept at rest in bed in order to allow the effused blood to absorb. Eighteen days after the operation she was able to walk freely, and a few days later left for the convalescent home. Eight weeks after the accident she reported herself at the hospital and walked without a limp.

It is an important fact in arranging operations on recent fractures to remember that free, often very free bleeding from the broken surfaces of the bone follows the accident. It is therefore unwise, as a rule, to operate on a recent fracture until sufficient time has elapsed for the bleeding vessels in the bone to become occluded. I allow an interval of five to seven days for this purpose. Infractions of this rule often lead to the formation of a hæmatoma between the fragments, which will occasionally mar wiring or plating operations.

The detachment of a small portion of a bone entering into the articular surface of a joint will often permanently disable that joint. The impaired mobility and often immobility of a joint which follows a small fracture involving the articulation is due to two causes: (*a*) the displacement of the fragment and its reunion at an angle to the bone from which it was broken must necessarily interfere with the freedom of movement of the joint, apart from the disorder produced on the articular face by callus; (*b*) the chronic inflammation of a joint that so often arises as a sequence to a fracture which involves articular surfaces not only leads to the formation of fibrous bands within the joint, but occasionally causes its complete disorganisation.

The cases described here are good examples of the ease and rapidity with which patients recover after excision of an external malleolus detached by accident. I venture to report them because the results are so much better than those obtained by the older method of rest or the application of splints, and far better than the repair which follows the newer method of wiring.

When considering the desirability of removing the broken fragment from the patient Case 2 I asked three of my colleagues what they thought of the suggested operation. They shook their heads and considered that the removal of the external malleolus would so impair the stability of the foot that the patient could not stand firmly upon it. I did not share this view; I believed a strong ligament would form between the lower end of the fibula and the foot which would keep the parts in apposition. I formed this opinion because, after exsection of the outer half of the clavicle, a stout ligament develops between the acromion and the outer end of the inner half of the clavicle. Experience teaches that patients are able to stand firmly and walk with ease and elasticity after the removal of the external malleolus.

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GERMAN ORTHOPÆDIC SOCIETY.—The thirteenth congress of this society will take place on April 13th and 14th, 1914, in the Langenbeck House, Berlin (Ziegelstrasse, 10/11), opening at 3 P.M. on the first day. The principal subjects for consideration will be the Operative Treatment of Spondylitis, to be opened by Dr. Albee, of New York; Physiological Requirements of Tendon Transplantation, and particularly Tendon Exchange, opened by Herr Biesalski. Other subjects will be the Technique of Arthrodesis, by Herr Gocht; the Theory and Practice of Abbott's Procedure, by Herr Schulthess; Operative Treatment of Flatfoot, by Herr Wilms. Notice of papers and demonstrations offered and membership matters must be addressed to the President for this year, Professor Th. Kölliker, of Leipzig (Marienstrasse, 20), before Feb. 15th. Preparations, apparatus, and instruments are to be sent to Herr Melzer, Langenbeck Haus, Berlin, and patients to Geh.Med.-Rat Professor Dr. Bier, Königl. Universitätsklinik, Ziegelstrasse, 5/9, Berlin.

# DIATHERMY,

## OR THE ELECTRIC WARMING OF THE TISSUES OF THE BODY.[1]

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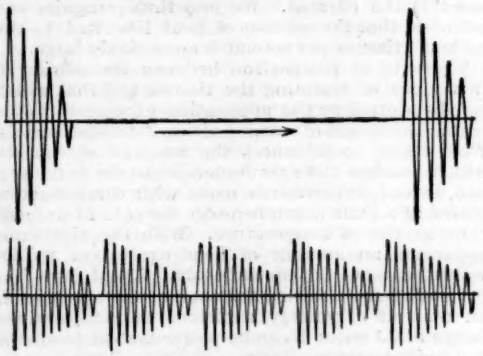
DIATHERMY is the through and through warming of the tissues, and it is effected by the use of high-frequency currents of large magnitude. It provides an efficacious mode of treatment in several morbid conditions, and seems to act particularly by its influence upon the circulation of the parts to which it is applied. In its medical uses the warming effect can be localised upon a joint or limb, or it can be applied over a large area of the body for the production of more generally diffused effects. In surgery the heating can be so concentrated upon a small area as to cause the thermal coagulation of a tumour, if its destruction is desired. In this country it has been used in this way by Mr. Harmer and by others for the treatment of inoperable malignant conditions of the mouth and throat with results which have been very satisfactory to the patient, even if the remedy is at best only a palliative one under these conditions. It has also been used for the treatment of lupus, of rodent ulcer, and of nævus, and various other possible surgical uses will readily suggest themselves.

The diathermy apparatus, apart from its practical utility, is one of great interest from the theoretical point of view, for it represents the intelligent application of an important fundamental principle of the physiology and therapeutics of electrical currents. Until quite lately we have had no secure basis upon which to build the edifice of medical electricity, and it is only quite recently that we have been able to perceive that electrical currents act either by their chemical or by their thermal effect. The chemical effects are effects due to that movement of ions which alone constitutes the current in an electrolytic conductor like the animal body. This movement of ions is a comparatively slow process, and time is required for the production of ionic effects, so that ionic effects are most evident with steady currents, though they are also evident with currents of brief duration, provided that the duration is not too short. With waves or impulses lasting one five-thousandth of a second ionic effects such as shock and muscular contraction can still be observed. When the duration of the individual impulses is less, then the ionic effects become less and less marked, to disappear entirely with oscillatory currents of a frequency approximating one million per second, such as are produced by "high-frequency" instruments. This is the reason why the ordinary effects of electrical currents are not felt with the currents of high frequency, and these currents would be inert for medical purposes if they were only used in strengths comparable with those used in other kinds of electrical applications. But the very fact that they produce no shocks and painful effects permits of their use in very much larger doses, and with the increase in the magnitude of the currents which becomes possible with high frequency a new factor previously negligible becomes prominent, and that is the thermal effect. For this thermal effect to become valuable in treatment currents approximating to 1 ampère (1000 milliampères) are required.

In these heating effects we seem to find the sole intelligible action of high-frequency currents. At least that appears to be the case if we except the action of the effleuves and the spark discharges sometimes used in high-frequency treatment, and even with these the effects of the effleuves and the sparkings may be defined as due to minutely localised thermal effects acting upon the surfaces exposed to them. There remains the possible action of the ozone and of the violet light associated with this spark production, but these can only play a relatively unimportant part. We may, then, assume that the effects obtained from the old high-frequency apparatus were really thermal in their nature, although this has not yet been fully recognised. For years the thermal effect of high-frequency currents remained almost unnoticed, whilst the results obtained from high-frequency applications were attributed to other vague properties of these currents or remained unexplained.

If we examine critically the various results said to have been obtained from high-frequency we may recognise the existence of a thermal explanation for many of them, and may also understand why some experimenters have failed to get results through using currents of insufficient magnitude so that their thermal actions were too feeble to be of use. If this be the correct view of the mode of action of high-frequency treatment we can recognise the great importance of the need for using large currents, and can see in the diathermy apparatus a rational and scientific development in one direction of an instrument which formerly afforded us no intelligible or rational basis for study.



Upper tracing shows oscillations from ordinary high-frequency apparatus. Lower tracing shows oscillations from diathermy apparatus. (From the author's work on "Medical Electricity," published by Mr. H. K. Lewis.)

Although the diathermy machine generates high-frequency currents, the manner of their production is different from that of the older apparatus. A spark gap is used for the production of the oscillations, as with the ordinary high-frequency apparatus, but instead of one long gap two or more very short gaps are used, and these are arranged in series. Under these circumstances there is much less damping of the oscillations, and they therefore last longer before dying out, and the trains of oscillations are also more numerous. Consequently, the discharges of the diathermy machine are much more nearly continuous or sustained, and

[1] A lecture delivered at the Medical Graduates' College and Polyclinic on Jan. 14th, 1914.

there is therefore much less time wasted in quiescence. With the ordinary high-frequency apparatus the intervals of no current are enormously longer than the periods of active flow. A diagram shows the different character of the discharges in the two cases.

In the next place a sinusoidal current obtained from the alternating mains or from a motor generator is used instead of an induction coil as the source of current, and its voltage is raised by a step-up transformer to about 1000 volts. The transformer feeds a circuit composed of a spark gap, a condenser, and a self-induction coil, for a circuit so arranged becomes the seat of high-frequency oscillations, and these are utilised by means of a second coil placed over the self-induction coil, and from this the current is drawn to supply the patient's circuit. The electro-motive force available for the patient is about 800 volts, which is very much less than that used in the usual apparatus for high frequency; but this voltage is sufficient, and a greater output is rendered possible in point of the magnitude of current. If a pair of metal handles are held in the two hands and the apparatus is set going, a very definite sensation of warmth is felt in the wrists and forearms as the current rises above half an ampère, and at one ampère it may easily become too warm to be borne with comfort for more than a short time. This warming effect is perceptible to a slight degree with the ordinary high-frequency apparatus. The total energy expended in the diathermy machine is between one and two horse-power, of which a considerable fraction is available in the patient's part of the current, where it is converted into heat, on the well-known principle that a conductor carrying a current is heated in accordance with the formula $C^2R$, where R is the resistance of the conductor considered, and C is the current. We may thus recognise and calculate that the amount of heat liberated in the patient's tissues per second is appreciably large.

There is no comparison between the efficacy of this mode of warming the tissues and that which can be caused by the application of warmth to the surface by means of warm pads or hot water bottles. With these contrivances the amount of warmth which reaches the subcutaneous tissues is trifling, and, indeed, experiments made with thermometers placed at a little depth beneath the skin of animals show no rise of temperature. With the diathermy apparatus an amount of heat equivalent to 300 watts or more is continuously poured into the patient's tissues during the time of the application, an amount of energy sufficient to maintain ten lamps of 30 watts (8-candle-power carbon lamps) at full incandescence.

These considerations show that in diathermy we have a valuable therapeutic resource, for it puts in our hands for the first time a method of pumping heat into the body in quantities which can exercise very decided effects.

*Method of application.*—In order to administer these large currents without mishap it is necessary to pay special attention to the electrodes, because if these are not well arranged there is likely to be an excessive disengagement of heat at the points of contact, with burns of the skin. In practice it is found that the best results are obtained with bare metal electrodes of good size and sufficiently pliable to adapt themselves well to the service. Pure tin in thin sheet is suitable, and the skin may be sponged with warm, strong salt solution just before the electrodes are applied, though this is not always necessary. The strength of current used will depend upon the thickness of the parts traversed by the current. If the electrodes are held in the hands the effect of heating is most felt in the wrists, and a suitable magnitude of current is about 500 milliampères. For the feet and elbows a current of 600 milliampères may be used; for the knees and thicker parts of the limbs an ampère or even more is a safe current. The patient's sensations may be taken as a guide: so long as these do not exceed an agreeable feeling of warmth all is well, but if the parts begin to feel uncomfortably hot, and especially if any sensation of cramp is felt, the current must be reduced. The applications may be given for 15 or 20 minutes, and repeated daily or less often as may seem to be indicated by the nature and progress of the case.

The many circumstances in which the application of warmth gives relief will suggest that diathermy may often be valuable. To-day I shall content myself with mentioning a few of the conditions in which applications of diathermy have proved themselves useful.

*Arterial hypertension.*—The use of high-frequency currents in states of hypertension has been much discussed, and different authors have expressed very varying views as to their value. It is probable that a good deal of this uncertainty has depended upon the quality of the high-frequency currents used, and that many of the failures have been due to inadequate strength of current. With the larger currents of diathermy an effect upon the blood pressure is more readily obtained. In healthy individuals a fall of blood pressure is the first result of the peripheral relaxation which follows the warming of the tissues, and this is quickly followed by a compensatory action on the part of the heart, so that the final result is to leave the blood pressure unchanged or nearly so; but in patients with arterial hypertonus and consequent high pressure the diathermy treatment often leads to a reduction of the blood pressure, which continues for a time, and may become permanent after a course of the treatment. Nagelschmidt has mentioned a number of cases in which a lasting reduction of the blood pressure occurred; for instance, in one case from 220 to 140, from 210 to 170 in another, from 235 to 160 in a third, and so on. The same writer also refers to another symptom which is often found in patients with hypertension, and that is the state of coldness of the extremities. This disagreeable condition occurs both in patients with low blood pressure and those with high. In the latter it is due to the narrowed peripheral vessels and the scanty blood-supply which they admit to the hands and feet. This condition is very agreeably benefited by the diathermy treatment, and from the patient's point of view it serves as a valuable indication that the treatment is doing them good. I have observed this good effect in some of my own cases, notably in one in which the blood pressure was 180 before treatment and gradually fell to 160. Coincidently with this there was great relief to the cold extremities. The patient was attending in March of last year, and the weather was cold and wintry, but after each application of diathermy the coldness of feet and hands disappeared and the patient said that she remained warm all day. In this case the applications were made first to the hands and then to the feet, each receiving

ten minutes' diathermy. In this case a troublesome metatarsalgia also disappeared during the applications.

Other conditions of defective circulation for which diathermy is useful may be mentioned. In intermittent claudication, which may be associated with obliterating endarteritis or with phlebitis, diathermy is useful. In this complaint severe pain comes on in one or both lower limbs after walking for a short distance. It may be so severe as to compel the patient to stop, and with rest the pain ceases. If the walk is resumed the pain comes back as before, but sooner. The condition is due to a defective blood-supply which is adequate only so long as there is no great muscular effort. When the muscles are used the blood-supply is deficient, and the pain and cramp are the signs of the deficiency. Diathermy may also be used for chilblains, and for that vaso-motor condition in which one or more of the fingers "go dead" and turn white and cold in winter time. Nagelschmidt has also recorded several cases in which diathermy applied to the thorax has given great relief in angina pectoris.

*Sciatica.*—This is a condition for which diathermy is particularly valuable, because of the frequent failure of the other recognised methods of treating this symptom. I have tried diathermy in sciatica side by side with ionic medication, and have found that patients, after experience of these two methods, pronounce definitely in favour of diathermy as the more effective procedure. Nor is this to be wondered at when one considers the probable nature of sciatica as a state of congestion of the sciatic nerve trunk, or of its roots. Most of the accepted modes of treating sciatica, such as the local application of warmth, radiant heat baths, electrical currents, whether direct or interrupted, &c., all probably act by influencing the circulation in the congested area, and diathermy by its more potent action in warming the deeper tissues might reasonably be expected to prove valuable in this respect.

For the treatment of a case of sciatica a large electrode should be applied to the thigh and another large electrode across the loins. A current of one ampère or more may be used, but above one ampère it is necessary to watch for signs of over-heating of the skin near the electrodes and to be prepared to reduce the current at once if the patient should give warning that the heating effect is becoming uncomfortable. In lumbago a similar arrangement of the electrodes may be used, or one of them may be placed on the abdomen while the other is across the loins.

It is probable that diathermy would be of service in the sacral backache which occurs in women This is most likely due to some pelvic congestion, and if so the decided "decongesting" action of diathermy deserves to be tried. Nagelschmidt states that he has found diathermy useful in many cases of ovarian neuralgia and of pains associated with peri- and para-metritis. He says that parametric infiltrations which he had treated by diathermy solely for purposes of trial, and without expectation of success, had rapidly and entirely disappeared after a few applications.

*Joint affections.*—Diathermy has been extensively tried for joint affections. It is as yet uncertain whether it is likely to prove of value in rheumatoid arthritis. In gonorrhœal joints it appears to be very useful, and Nagelschmidt tells us that painful acute gonorrhœal joints may be rendered quiet and free from pain in one or two days by this treatment. He suggests that the heating of the joint may have a direct effect in killing off the gonococcus, a germ which is known to be easily influenced by comparatively slight increases of temperature. At the same time he points out that in cases which are not recent permanent damage to the joint may have been produced, and that in these later cases when the actual structure of the joint has been injured it is not so easy to obtain a perfect result. When the warming effect is to be directed upon a joint the electrodes should be placed above and below it, rather than upon its actual surface, for we must remember that the warming effect is not localised at the electrodes, but influences the whole of the conducting tissues which lie between them.

*Neuritis and neuralgia.*—I have found diathermy to be valuable in various forms of painful perineuritis and neuralgia, and it has been strongly recommended by Nagelschmidt in the pains of tabes.

A very interesting application of diathermy has been proposed by Bergonié,[2] namely, its use in patients with defective powers of assimilation as a means of supplying them with energy over and above that which they obtain imperfectly from their food. He points out that a considerable part of the energy which the organism obtains from food is expended in maintaining the warmth of the body. If assimilation is defective the daily intake may be too little to provide both for the warmth of the body and for keeping up a proper degree of bodily nutrition. When this is the case the patient becomes thin and miserable and his condition can be greatly ameliorated by supplying him daily with a certain number of thermal units from the diathermy apparatus. The warmth he thus receives reduces the expenditure of food demanded for keeping his body warm, and sets it free to be used for maintaining the nutrition of the tissues. He has reported an interesting case of this use of diathermy, in which a considerable gain in weight and improved vigour of body followed the treatment, and he rightly points out that when used in this way an application of diathermy is equivalent to a supplementary diet ration. Although the publication of his paper on this point excited some humorous comment in France in the daily press, which took the line of pretending that electricity was to be used to take the place of a good dinner, one may recognise in Bergonié's suggestion a method of assisting defective nutrition which may prove of considerable value.

Those who wish to follow up the subject of diathermy will find an exhaustive treatise on the method by Nagelschmidt, of Berlin ("Lehrbuch der Diathermie"), and Zimmern, of Paris, has recently published an interesting article on it.[3]

Harley-street, W.

[2] Archives d'Électricité Médicale, March 10th, 1913.
[3] Medical Press and Circular. Jan. 7th, 14th, 1914.

CENTENARIANS.—On Feb. 1st Mr. Hazael Newman, of Plumstead, celebrated the 100th anniversary of his birthday, and on Feb. 2nd Mr. John Durant, of Weybridge, the 105th anniversary of his birthday. Mr. Robert Coles, of Croydon, has recently died at the age of 105.

ROYAL SANITARY INSTITUTE.—On Tuesday next, Feb. 10th, at 7.30 P.M., at 90, Buckingham Palace-road, a paper will be read by Mr. Edwin T. Hall, F.R.I.B.A., architect of the building, on the King Edward VII. Welsh National Memorial Sanatorium, Pont-y-Wal, South Wales. A discussion will follow on the cost and construction of sanatoriums under the National Insurance Act.

# VACCINES FROM THE STANDPOINT OF THE PHYSICIAN.[1]

BY H. D. ROLLESTON, M.D. CANTAB., F.R.C.P. LOND.,
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IN resuming this discussion it may be well to remember that its scope is confined to the effects of treatment by vaccines, good, bad, or negative, and, further, that the subjects of prophylaxis and of tuberculin should as far as possible be avoided. In the opening speeches the two most striking statements were the frank admission that the failures of vaccine therapy were probably much more numerous than its successes, and that vaccines when employed should be in addition to, and not as a substitute for, the ordinary methods of treatment. Dr. Phineas Abraham's suggestion that another word should be used in the place of "vaccine" is probably too late, for the American substitute, "bacterin," has not apparently made much headway.

Opinion on vaccine therapy may be divided into the following classes: 1. The optimistic, held by those who, while under the fascination of a new conception of a really rational treatment, have seen several cures in succession. This attitude is usually somewhat modified by time. 2. The pessimistic, more often expressed in private than in print, to the effect that vaccines never do any good and that benefit apparently due to their use is either a coincidence or is perhaps due to suggestion. This latter destructive criticism demands some courage from those who hold it, for it lays them open to the retort that their bad results depend on faulty technique, insufficient experience, or reluctance to give credit where credit is due. I therefore hope that Dr. H. Batty Shaw,[4] who has so openly expressed his views, will not feel that as secretary of this section of the Royal Society of Medicine it is his duty to smother his convictions. 3. The doubtful or open-minded. This is my own position. Curative vaccine treatment must be admitted to have disappointed the high hopes with which it began, and in this respect its history resembles that of most remedies. The problem of immunity is so complex that it is highly probable that the technique or practice rather than the principle of vaccine therapy is at fault, and that in time this may be so perfected as to establish the position of vaccines as a reliable remedy. The determination of the infecting micro-organism is exposed to well-known fallacies and may be very difficult. Even with all due precautions a wrong vaccine may be given and do harm; the blood of a woman suspected of infective endocarditis was sterile, but agglutinated *Micrococcus melitensis*, and a vaccine was therefore given. Her condition then rapidly deteriorated, and the necropsy, 18 days after the vaccine was begun, revealed infective endocarditis with multiple abscesses in the kidneys. Possibly the conditions of culture on artificial media may so modify the products of the micro-organisms of which the vaccine is composed as to render artificial inoculation far inferior to auto-inoculation. It has therefore been suggested that vaccines should be made from organisms grown on blood or other natural media (Hort[2]). There is an obvious analogy between vaccine and organo-therapy; the success of thyroid substitution treatment has been so irrefutable that it has stifled any doubts as to the rationale of the treatment, which might be raised by want of success with other glandular extracts. In Addison's disease, for instance, some link in the chain necessary to secure success in adrenal medication commonly fails to hold; and artificial organo-therapy, like artificial inoculation, shows itself a poor substitute for the normal process. The hypothesis of pluri-glandular insufficiency has brought forth an industry of pluri-glandular therapy which is comparable to that of the "phylacogens."

Further, there is no doubt that vaccine therapy has been used improperly in many ways; thus, it has been employed as a speculation—namely, in cases in which the nature of the infection is assumed but not proved; for example, a stock pneumococcic vaccine is given to a patient thought, from symptoms and signs but not shown bacteriologically, to have pneumococcic infection of the lungs. This attitude, which is quite foreign to its rationale, has damaged vaccine therapy and has exerted an evil influence on medicine generally. The introduction of "phylacogens" recalls the happy-go-lucky polypharmacy of a bygone age. That bad results may follow injections of vaccines must be admitted. I have seen cases in which this sequence of events, and even grave illness, seemed beyond doubt. It may be due to administration of the wrong vaccine, to excessive dose of the appropriate vaccine, or to acquired hypersensitiveness on the part of the patient. Although it may sound paradoxical, the power of vaccines for evil may be regarded as, to some extent, an argument that they may in different circumstances be powerful for good.

At the present time the results of vaccines are so uncertain that their use appears to be justified only when trustworthy therapeutic methods have failed or do not exist. Few, if any, would be prepared to argue that the specific action of vaccines is as certain as that of such drugs as mercury, iodides, bromides, salicylates, digitalis, and arsenic.

That good effects, sometimes dramatic in their intensity, may follow the use of vaccines is also undoubted. But the old question—*post hoc propter hoc* arises. Difficult as it is to decide this problem in the absence of exact controls, it seems wiser to act as if the sequence of events was not a coincidence only, and in cases in which nothing better is available to give our patients the chance of benefit from vaccine treatment. In conclusion, I will refer briefly to two cases of diseases usually resistant to vaccine therapy, in which cure followed this method of treatment.

In the case of a woman with an old mitral lesion an oscillating temperature appeared and a blood culture by Dr. E. L. Hunt showed a micrococcus differing both from the streptococci and pneumococci usually found in malignant endocarditis. The administration of a vaccine was gradually followed by a normal temperature and apparent cure. This case is mentioned because the usual experience is that vaccine therapy fails in infective endocarditis; thus Wynn,[5] who was successful in other systemic infections, did not obtain any good result in 15 cases of streptococcic endocarditis, and Horder[1] reported a similar experience in 12 cases. But on the other hand it is quite possible that the improvement in the case just mentioned was independent of vaccine treatment, for Libman[6] has shown that bacterial-free periods and recovery may occur spontaneously in subacute bacterial endocarditis. In a case of acute pyelitis due to *Bacillus coli* in an infant

[1] A paper read before the Section of Medicine of the Royal Society of Medicine at the opening of a resumed discussion on Vaccines on Feb. 3rd, 1914.

aged 2 years injection of one-sixth of a million of bacilli brought the temperature down at once in a very striking manner. This appears to be an exceptional result, but I cannot help correlating it with the treatment. In chronic local infections of various kinds, such as arthritis and colitis, in which gradual improvement follows vaccine therapy, it is very hard to decide whether the credit is due to the treatment or to Nature unassisted.

*Bibliography.*—1. Horder: Quarterly Journal of Medicine, Oxford, 1908-9, vol. ii., p. 323. 2. Hort: Journal of Hygiene, Cambridge, 1912, vol. xii., p. 389; Journal of Vaccine Therapy, London, 1913, vol. ii. 3. Libman: American Journal of Medical Sciences, Philadelphia, 1912, vol. cxliv., p. 313. 4. Shaw, H. Batty: Brit. Med. Jour., 1913, vol. i., p. 921; Medical Chronicle, Manchester, 1913, vol. lviii., p. 185. 5. Wynn: Journal of Vaccine Therapy, London, 1912, vol. i., p. 253.

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## FRESH ALARMS ON THE INCREASE OF CANCER.

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STATEMENTS emanating from the United States have recently been made public alleging an alarming increase of cancer.[1] Mr. F. L. Hoffmann, who is responsible for these statements,[2] takes the stand that it is absolutely incredible that the figures he gives—namely, a cancer death-rate of 63 per 100,000 of population in 1900 and of 74·3 in 1911 *for the United States* and for the large cities of 37·2 per 100,000 of population for the five years ending with 1876, and of 80·5 for the five years ending with 1911—do not represent an actual enormous increase, and he deplores the waste of time spent in questioning an undoubted increase.

In endeavouring to appreciate what importance should be attached to these statements it is necessary to call to mind the history of vital statistics in that country, and also their very backward condition at the present day. From 1850 to 1900 the endeavour was made to collect figures of deaths through the enumerators as part of each decennial general census of population of the United States. This attempt at centralisation was doomed to failure because only immediate registration can be effective, and the method was abandoned in 1910. Centralisation of the recording of births, deaths, and marriages has not yet been effected in the United States, and recourse must be had to the reports of the several States. These are of very unequal value, and, indeed, are often nearly valueless.

In 1880 the compulsory registration of deaths, as enforced by municipal or State authority, was first introduced at Massachusetts, New Jersey, the district of Columbia, and for some cities where State control did not obtain. Even to-day there is no registration law at all, or, if so, it has only recently been placed on the Statute Book in many States like Alabama, Georgia, Illinois, and South Carolina. The statistics available for Pennsylvania were utterly valueless up to 1906, as were those for Ohio up to 1909, and those for Missouri and Kentucky up to 1911. Several of those named are Eastern States. The Southern States are still entirely without any sort of reliable registration.

At the present time only 22 of the Eastern, Northern, and Western States make any claim whatsoever to enforce the registration of deaths, and in many of these the law is most imperfectly carried out. For New York City itself Oertel[3] has shown that the greatest laxity and inaccuracy obtains, owing to the negligence of the medical profession and the unwillingness of the authorities to enforce the prescribed penalties. In addition, the attempt is made by 38 municipalities, and by those towns of North Carolina with populations of 1000 and upwards, and by the District of Columbia. Thus from 8,538,266 in 1880 the numbers under registration law have been raised to 59,275,977 in 1911. In other words, while imperfect registration of deaths covered only 17 per cent. of the population of the United States in the year 1880, 31·4 in 1890, and 37·9 in 1900, 63 per cent. are so affected to-day. This is a great improvement in the registration of deaths, but 37 per cent. of the population still remains without even imperfect registration of the causes of death.

By 1900 only 11 States were Registration States. Moreover, prior to 1902 no two States and scarcely any towns used precisely the same methods of certifying deaths. In that year the "standard" certificate was introduced. As revised by Act of Congress in April, 1913, it is now being approved or used in most States of the Union, including Alaska, except Alabama, Georgia, Illinois, New Hampshire, New Mexico, Rhode Island, South Carolina, and West Virginia. It is evident that no comparison is possible between one year and another *for the United States*, or even between different States.

It must be added emphatically that even the States longest under the "compulsory" registration law—e.g., Connecticut and Massachusetts—have not yet succeeded in enforcing registration of all births. The total population of the United States at the Census of 1910 was 90,753,277. For 1911 the aggregate estimated population of the registration area of the United States was 59,275,977, among whom there were 839,284 deaths recorded. In England and Wales for the same year a population of 36,163,833 yielded 527,810 deaths. For the same year the births and the infantile mortality in *the registration area of the United States* cannot be estimated with any approach to accuracy, but in England and Wales the births numbered 881,138—i.e., more than seven and a half times the deaths of infants under 1 year (114,600). Thus the United States present a marked contrast. No State has complete registration of births. In 1911 in 11 States only did the births exceed the number of children returned as aged 1 year or under. In 1911 in only two States did the births registered equal the number of infants, and only in three States did the births exceed the figures for infants by the small margin of 10 per cent.[4] The discrepancies in the above figures of births and deaths in relation to population for the United States, as compared with England and Wales, are to be explained largely by the considerations set forth with reference to the imperfect registration of births and deaths; they signify hundreds of thousands of unpunished offences against the registration laws of the United States in one year. The offences against the Registration Acts in England and Wales amounted in the same year to the small total of 19, all of the offenders being prosecuted and convicted.

These facts are of themselves a sufficient commentary on the very imperfect extent to which

[1] THE LANCET, Jan. 3rd, 1914, p. 47; The Times, Jan. 20th, 1914.
[2] Frederick L. Hoffmann: The Menace of Cancer, Transactions of the American Gynæcological Society, 1913. Clinical Congress of Surgeons of North America, Chicago, 1913.

[3] Oertel: American Underwriter, May, 1913.
[4] Exclusive of cities of a population of 500,000.

births and deaths are registered in the United States. It is a matter of common knowledge how high infantile mortality is, and how it must be taken account of in accurate statements of the total mortality of a population. It is also common knowledge that the age constitution of a population is determined by the birth-rate, if immigration and migration be left out of account, and that the age constitution of a population has an important relation to the death-rate. The birth-rate itself affects the death-rate only according as it alters the age constitution. While such inaccuracies obtain for the two chief events in life—birth and death—the age constitution of the United States is simply unknown, and the question arises, Is it to be entertained as possible that subsidiary events, such as the occurrence of cancer, are likely to be stated with greater accuracy? Even when the physician certifies the cause of death he is asked to supervise *voluntarily* the statements made by the layman as to such important matters as *age*, *sex*, colour, marriage, occupation, birthplace of father and mother, and duration of residence. Voluntary certification has invariably broken down; the physician devotes all his attention to his compulsory duty when filling in a death certificate, and he will not bother about requests that he should volunteer to give information as to other details relating to the deceased. Sex and age are most important in regard to all causes of death, but they have a unique importance in the case of cancer.

The inference to be drawn from a study of the confused state of affairs in the United States is that improvements are being effected in the collection of vital statistics of that country, as the result of the praiseworthy efforts of the Census Bureau in Washington, under the initiative of Cressy L. Wilbur. Nevertheless, statements of the causes of death are still only possible per 100,000 of population, no account being taken of age and sex. The imperfect registration of births and deaths makes this method, recognised as crude under the best circumstances, even of less value. For example, absence of accurate enumeration of the number of births makes it impossible to estimate the proportion of males and females, or even of all children dying under the age of one year. This of itself invalidates any comparison per 100,000 of population, and greatly influences the still more erroneous figures published for some States for which the deaths from cancer are stated as percentages of total deaths, or as "rates" per 1000 deaths from all sources.

Mr. Hoffmann states: "The cancer death-rates in the registration States, for which the data are as trustworthy as for any European country, was 72·1 per 100,000 of population for the year ending 1909."[5] Since the age and sex constitution of the population is unknown this claim cannot be upheld. A table setting forth the "mortality from cancer for the United States (Registration States) per 100,000 of population and sex" has an appearance of accuracy which cannot be attained owing to the inadequacy of the primary data. As is well known, under 5 and over 55 the general death-rate is higher than the combined death-rate for all ages or for any intermediate age periods. The proportion of the population living at different age-groups differs greatly in different areas, and therefore the relative numbers at the two extremes of age which are subject to the highest death-rates will vary correspondingly and the relative total death-rates for all ages will vary. Hence when particular States are selected and special death-rates for cancer are stated for each sex, for age-groups above 30 or 40 and for particular sites, the figures are equally valueless because the age and sex constitution of the population is unknown owing to the imperfections of registration. As a matter of fact, "after most carefully re-examining the entire statistical material for the civilised world," Mr. Hoffmann should have become aware that European countries show as wide variations in their figures of population and of deaths from cancer as do the States of the Union. This is a point frequently emphasised as indicating only the stage to which their several vital statistics have developed.

Consideration of the preceding remarks on the position of vital statistics in the United States shows that an accurate method simply cannot be adopted for the United States as a whole or even for one or two States, if indeed for any single State. It is not attempted for one out of the oldest registration States—viz., Connecticut,[6] for which State in the Report for 1910 the deaths from cancer are lumped together with the whole group of "general diseases" of the International Nomenclature—i.e., not only with the infective fevers, but also tuberculosis, syphilis, gonorrhœa, &c., and then all these deaths are stated as a percentage of the total deaths from all causes. For Rhode Island the deaths from cancer are stated for the months and quarters of the year as a percentage of all causes of death and per 1000 of population in the Report for 1909.

The only advance attempted from this most fallacious of methods is to statements per 100,000 of population. The annual report of the Department of Health for New York City (1909) baldly states: "The mortality from cancer and sarcoma has increased at an enormous pace; in the decennium 1868–1877 the number of deaths reported was 5556 and the rate 39 per 100,000, and in that of 1898–1907 the deaths numbered 23,648 and the rate reached the high figure of 67 per 100,000, an increase of 72 per cent. in the rate." In England and Wales the corresponding crude figures are 98 per 100,000 of population; and the discrepancy simply means that the most cancer-ridden areas of the United States have all the leeway implied to make up in the collection of data. Similarly the thirty-fourth annual report (1910) of the Board of Health of the State of New Jersey, which with Massachusetts was the first to introduce "compulsory" registration in 1880, gives two tables, one stating the deaths per 10,000 of population as rising from 3·70 in 1879 to 7·07 in 1909. The other table gives merely the total number of deaths at several age periods from 1901 to 1909. The height of absurdity of this way of stating death-rates is reached in the case of the District of Columbia, which, it will be remembered, is that small neutral area within which Washington, the capital of the United States, is situated. In the report of the health officer for 1910 one column gives the deaths from malignant growths per 100,000 of population, and the adjacent column the death-rates from measles per 100,000 of population. Here the extremes of life meet on an equal footing with a vengeance!

It is needless to multiply instances, since sufficient has been said to make it remarkable that Mr. Hoffmann has nowhere made any reference to

[5] The Menace of Cancer, p. 8.

[6] The report of Massachusetts is not accessible to me.

the unsatisfactory state of the collection of the data upon which the vital statistics of the United States are based, as described above, and nowhere refers to the statistical fallacies laid bare in this paper. It is even more remarkable that there is no reference to the straightforward confession made by the distinguished Director of the Census Bureau in Washington of the inaccuracies inherent in the primary data as collected by the several States. Nevertheless, Mr. Hoffmann says categorically: "After most carefully re-examining into practically the entire statistical material for the civilised world, I am absolutely convinced that the cancer death-rate is increasing, and that the recorded mortality is not primarily due to improved medical diagnosis and more accurate methods of death certification."

The facts related regarding the improvements effected in the registration of deaths and births for the United States and their present imperfections, as well as the fact that 37 per cent. of the entire population is still under no registration law at all, sufficiently demonstrate the influence "more accurate methods of death certification" must have exerted since 1876, since 1880, since 1902, or even since April, 1913, these years marking important developments. Mr. Hoffmann himself claims that the greatest increase has been during the last ten years. Although this is too short a period to admit of his far-reaching conclusions, it may be pointed out that the proportion of the population of the United States under registration law rose from 37·4 to 63·1 during this decade.

As regards "improved medical diagnosis," one can hardly conceive that even under the difficult circumstances[†] obtaining in the United States, more accurate certification has not been promoted by the development of more accurate methods of registering deaths in the United States, as well as by the many other factors recognised and allowed for in the statistics of European States.

In view of the circumstances pertaining to the collection of the elementary data of vital statistics emphasis must again be laid on the probability that, when speaking of so obscure a disease as cancer and of such difficult problems as are involved in its statistical study, Mr. Hoffmann is quite unjustified in claiming that the cancer death-rates in the registration area of the United States are based upon data as trustworthy as for any European country. The primary data of population will not stand comparison with the corresponding data on which the English vital statistics are based. Still less will the cancer statistics of the United States, or of any single State, stand a comparison with the corresponding special English statistics, and the same applies to other European countries.

There are many other matters to which exception may be taken in the papers under consideration—notably the complaint that the collection of figures of deaths at the decennial census of the United States has been abandoned, reliance on the valueless cancer census in Germany and Hungary, and on the alleged low cancer death-rate for Ceylon, "since the vital statistics for this island are generally accepted as entitled to confidence." No allowance is made for immigration or migration, both of which may radically affect the age constitution of the United States as a whole, and that of the several States.

[†] For example, Oertel has pointed out with great emphasis the rarity with which necropsies are performed—necropsies may add as much as 40 per cent. to the cancers diagnosed in internal organs; the difficulties associated with immigration and floating population also may be mentioned.

It is to be regretted that one who, in virtue of his office as statistician of the Prudential Insurance Company of America, wields so much authority on statistical matters in the United States, should have been so incautious in his statements alike of facts and in the deductions drawn from unreliable data, while at the same time neglecting all the limitations to which his figures are subject.

It is not the present purpose to discuss again the question of the real or apparent increase of cancer, but only to show the inadequate basis upon which alarm has been again raised in America and communicated to the public of this country. Nevertheless, the analysis of deaths from cancer for England and Wales, in which due regard is paid to age, sex, and site distribution of the disease, has completely demonstrated that it is wrong to speak of an increase of cancer as a whole. While admitting discussion of the real or apparent increase for certain parts of the body—since the unintentional experiments of native races alter entirely the relative anatomical distribution of cancer as known for Europeans—these statistics clearly demonstrate that for other parts no increase has taken place. The position taken up by King and Newsholme in 1893 has been amply justified, that the increase is mainly in parts of the body inaccessible to complete examination, as has also the development of the views of these authors as set forth in the reports of the Imperial Cancer Research Fund.

While other countries have been discussing the "increase" of cancer during the past 12 years on the old imperfect primary data, by means of antiquated statistical methods in which all cases of cancer are lumped together, and no allowance is made for sex and age constitution, or have been endeavouring to circumvent the handicaps thus imposed by means of fallacious voluntary or compulsory cancer censuses, the General Register Office in this country has been carefully tabulating year by year more elaborate and more accurate primary data. The new and very important deductions thus made possible are set forth in the recent reports of the Registrar-General for Births, Deaths, and Marriages. The biological (etiological) significance of some of these improvements was foreshadowed in 1905 in the Second Scientific Report of the Imperial Cancer Research Fund. The results attained have also been commented on in the more recent reports of this Fund.

To sum up, the statements of an alarming increase of cancer in America have only the value of vague rumours; they are based on figures and not on statistics. The harm these rumours of high mortality may do it is not possible to define. It is hoped, however, they will at least serve to awaken the American people to the necessity for enforcing the registration laws if the alarm awakened is to be allayed, future alarms avoided, and if they are to obtain the many practical benefits which accrue from accurate vital statistics as opposed to the sanitary and financial losses which their absence inevitably entails. This will be the work of years, and meantime discussion of the real or apparent increase of cancer in America lags at least 20 years behind the times, and ought not to disturb the equanimity of anyone.

To take up this attitude is not to detract in any way from the grave importance of cancer as a cause of death. Nor is it to assert that were all the facts known cancer would be found to be uniformly prevalent in all countries and in all decades. Differences in prevalence of certain forms

of cancer do occur in widely separated parts of the globe; whether such occur in more restricted areas can only be determined by accurately registering the several sites attacked.

## AN OPERATION TO IMPROVE THE EFFECT OF AN ARTIFICIAL EYE.[1]

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THE disfigurement caused by the loss of an eye varies considerably. Many factors go to make up the effectiveness or otherwise of the artificial substitute. Other things being equal, such as the presence or absence of scarring due to the condition that necessitated the removal of the eye, the controlling factor in the effectiveness of the disguise is the shape and size of the palpebral fissure. When the fissure is small the disguise is usually effective, so much so that many wearing glass eyes pass unremarked even by careful observers. When the palpebral fissure is wide and generous in its proportions the glass eye becomes the most marked feature of the face, and there is no escape from the fixed stare of its artificiality. It is no disguise, rather it seems to make manifest the loss. The disfigurement is the more lamentable in that palpebral fissures of wide and generous proportions are usually found in faces of fine and often noble type. Indeed, the large, full eye is written of with innumerable variations as the characteristic of the noble and beautiful—"The classical profile ..... Their large black eyes." The large and widely separate lids disclose the beauty of the natural eye; much more do they disclose the naked bareness of the artificial eye. In such cases the insufficiency of the supporting shell is commonly marked by a definite space between the shell and the external canthus, and always by a deep hollow beneath the eyebrow, and a lesser furrow in the lower lid, all due to the falling away of the lids from their insufficient support. Whilst even when the movement given to the shell is actually fair or good, it looks poor by reason of the extent of the white of the eye still exposed to the right or left when the eye is turned to the full in those directions.

The operation which I am about to describe is based on the above observations. It is designed so to alter the palpebral fissure as to give the naturally "large eyed" subject the benefit of the "small eyed" when a false eye has to be worn. The operation is in brief tarsorrhaphy. Both lids are split for a sufficient distance about the external canthus, and the raw surfaces of the skin flaps are sewn together and allowed to unite. The union produces a narrowing of the palpebral fissure, and an effective disguising of the artificial eye.

### *Mode of Operation.*

1. *Clamping the canthus.*—Both lids and the external canthus are secured in a clamp. At first Snellen's entropium forceps was used, but this is ineffective. It will not secure both the palpebral vessels; further, the frænum-like fold of conjunctiva immediately below the canthus does not allow the clamp to get far enough outwards. The clamp illustrated (Fig. 1) has been devised to facilitate the operation. The upper blade has a diamond-shaped opening; when the extremity is 5 mm. beyond the canthus as much as 12 mm. of each lid are framed by the rim. The lower blade is a plate of the same measure, except that the extremity is cut out in a V-shape to accommodate the frænum before mentioned. It has been made by Messrs. Weiss and Son, Oxford-street, London, W.

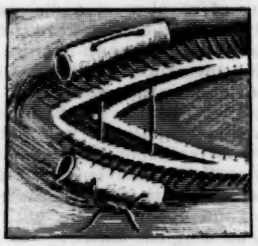
FIG. 1.

Author's forceps for external tarsorrhaphy.

2. *Incision.*—The lid secured, the intermarginal space is incised to the depth of from 5 to 6 mm., so as to separate the skin and lash layer from the conjunctiva and glandular layer. A bent Jaeger keratome of full size is the most convenient knife for the purpose. The angle of the blade with the handle keeps the latter clear of the clamp: one or two thrusts of the keratome will split each lid with ease.

3. *Suturing.*—A suture is arranged to unite the skin layers as follows. To a length of No. 2 silk two fine curved needles are attached. A piece of rubber drainage tubing 10 mm. in length is taken, and the needles are passed athwart the tubing parallel to each other about 4 mm. apart; they are drawn clear until the rubber makes a bar on the middle of the silk. Now each needle is passed through the skin flap of the upper lid from without inwards, and then that of the lower lid from within outwards. The needles are finally passed through another 10 mm. piece of rubber tubing to match in size and position the piece now lying on the upper lid. (Fig. 2.) The suture is loosely tied in the first part of a surgeon's knot so as to bring the rubber tubing evenly against the skin of the lids. The clamp is now removed, and the sutures are tied sufficiently tightly to evert the raw surface of the lids and press them together. The rubber tubes give an elastic pressure and prevent cutting of the skin by the ligature.

FIG. 2.



Plan of operation with suture *in situ*.

*Extent of operation.*—The extent of the union of the lids necessary to produce the best effect can be gauged before operation by pinching the lids together. At the time of the operation it is better to aim at doing rather too much than too little, and to unite the lids a trifle more than appears necessary, for too great an effect is easily rectified within a few days of the operation.

[1] A paper read before the Section of Ophthalmology of the Royal Society of Medicine on Dec. 3rd, 1913.

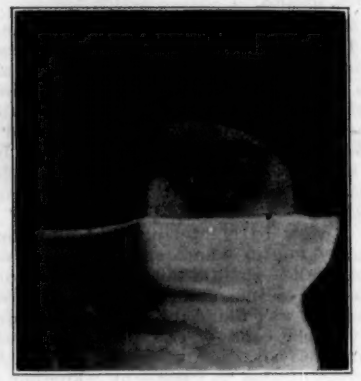
*Anæsthesia.*—For a fidgety patient a general anæsthetic is necessary. For a quiet patient a local anæsthetic is quite effective. After the cleansing of the lids and removal of the grease from the margin, the region of the canthus is swabbed with 5 per cent. cocaine solution; in a few minutes the mucosa is numbed. The clamp is then fixed in position. Now the needle of a hypodermic syringe is pushed into the intermarginal space first of one lid and then the other, and a few minims of adrenalin and cocaine are injected. The clamp prevents the fluid from passing into the circulation and ensures a full local effect.

*Removal of dressing.*—On the fourth day the dressing and ligature are removed. The shell worn before the operation is slipped into the socket, and the effect is judged. If too much union has been produced this can now be remedied by gently and steadily dragging apart the lids so as to tear open the new adhesions. The raw surface is mopped until the bleeding ceases and the shell is left in position. In judging the effect allowance must be made for a slight apparent excess caused by the swelling of the lids consequent on the operation and the four days' bandaging.

FIG. 3.

Before operation.

FIG. 4.



After operation.

*Results.*

The effect produced by this small procedure is admirable. The best criterion is the opinion of the patients and their friends, and of their satisfaction in the cases upon which I have operated there is no doubt. To a critical judgment it is noticeable that in place of the fixed stare of the glass eye and the sunken lids there is produced a slight and subtle wink. The union of the lids at the canthus brings the remaining margins forwards on to the shell, slightly reducing the exposed area of the shell and shadowing it the more, so masking its artificiality. Yet the full line of the lid is continued by the united rows of lashes beyond the new canthus. The pull of the lids against each other smooths out appreciably the furrows above and below the lids; indeed, that of the lower lid is lost. The apparent movement of the eye is increased. Movement is always relative. With a wide palpebral fissure movement has to be full to be good; with a narrow fissure a very moderate movement looks good. The vacant space so commonly seen between the normal canthus and the artificial eye is lost, and this has a particularly satisfactory effect on the profile view of that side of the face.

The whole effect of the change produced by the operation upon the physiognomy of the patient is to make the natural eye the feature that catches the eye of the beholder. There is now no staring glass eye to focus the attention; it has become inconspicuous, so that the more natural and effective feature of the face, the real eye, catches and rivets the attention. One might sum up the effect in a line found in more than one of the early poets—

With one auspicious and one drooping eye.

The outlooking, auspicious eye takes our gaze; the slightly drooping, winking eye is a companion inconspicuous by reason of its lesser character.

Finally, the operation complete and the tissues healed, it is possible where glasses are ordinarily worn to give such a glass for the blind side as will make the palpebral fissure appear of equal vertical width with the natural side, and at the same time enlarge the upper lid so as to diminish still more the upper sulcus. A plus 3 to 5 D. cylinder, axis horizontal, will effect this. In the case of a man the wearing of a monocle on the natural side affords an additional disguise to any inequality between the conditions of the eyes. But even without these accessories the effect of the operation is sufficient.

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## NOTE ON THE FRAGILITY OF THE RED CELLS IN CONDITIONS ASSOCIATED WITH JAUNDICE.

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WHEN Chauffard demonstrated the fragility of the red blood cells in hæmolytic icterus a new field for clinical research was opened. In view of the comparatively small amount of work that has been published regarding this point, and the extent of our ignorance as to the disease, or diseases, designated hæmolytic icterus, it seems advisable to publish any note, however brief, that may throw light on some aspect of this condition or stimulate interest in its pathology.

Chauffard showed that in the case of blood taken from patients with acholuric jaundice hæmolysis would take place in solutions of sodium chloride

which were stronger than those in which there was hæmolysis if blood from other patients or from healthy people was employed.

*E.g.*—If ten tubes are prepared containing solutions of sodium chloride of the following strengths—viz., 1 per cent., 0·9 per cent., 0·8 per cent., and so on down to 0·1 per cent., and normal blood be added to each of these, hæmolysis takes place only in the case of the four weakest solutions—i.e., 0·4, 0·3, 0·2, and 0·1 per cent. On the other hand, if blood from a patient with acholuric jaundice be added to a similar series of tubes, lysis also takes place in the tubes containing 0·6 and 0·5 per cent. sodium chloride.

In testing the blood of other patients with jaundice—i.e., patients with an "icterus" that was not hæmolytic in origin—not only was there no fragility of the red cells found, but their blood was *more* resistant than that of healthy people to the lysing action of dilute solutions of salt.

*E.g.*—In several jaundiced patients whose blood has been recently examined at the London Hospital it was found that in each case there was only a *trace* of lysis in the 0·3 per cent. solution, and sometimes lysis was incomplete even in the 0·2 per cent. solution, whereas with normal blood there was some hæmolysis in 0·4 per cent., and it was complete in 0·3 per cent. solution.

This suggested that there might be in the serum of jaundiced patients a substance which tended to cause hæmolysis, and that the red cells of such patients having acquired power to resist the lysing action of this hypothetical substance were able also to withstand the tendency to lysis caused by 0·4 and 0·3 per cent. solutions of sodium chloride. Would such an effect be produced by the bile salts that are present in the serum of jaundiced patients?

With a view to answering this question tests were carried out in which small quantities of one of the bile salts—sodium taurocholate—were added to each of the sodium chloride solutions previously employed. It was found that if so small a quantity as only 0·25 per cent. of this salt was added there was complete lysis, even when the sodium chloride was as concentrated as 1 per cent. Further experiments with smaller quantities of sodium taurocholate showed that the addition of even 0·06 per cent. of this salt would allow hæmolysis to take place in the tube containing 0·5 per cent. sodium chloride, in which (without the addition of bile salts) there would have been no lysis of normal blood cells. This effect of bile salts in producing hæmolysis is not surprising when one bears in mind the intimate relation between the surface tension of a fluid and its power to produce hæmolysis; the effect of bile salts in reducing surface tension is classic.

If the above hypothesis is correct—if the presence of small quantities of bile salts in the blood serum leads to the production of hæmocytes which are better able to withstand the effect of dilute saline—is one justified in suggesting that a body may be present in the serum of patients with acholuric jaundice which (by an action the direct opposite of that of sodium taurocholate) diminishes the power to withstand hæmolysis? Urobilin is present in excess in the urine of these patients; is it the cause or only an effect of the increased fragility of the hæmocytes? The occurrence of an excess of urobilin in the urine of malarial cases and of the subjects of pernicious anæmia suggests that its presence is due to the destruction of the red cells, yet in these conditions the red cells are not unduly fragile.

I am indebted to Dr. P. N. Panton for the suggestions that underlie the tests referred to and for permission to publish the results.

# Medical Societies.

## ROYAL SOCIETY OF MEDICINE.

### SECTION OF MEDICINE.

*Continued Discussion on Vaccines from the Standpoint of the Physician.*

A MEETING of this section was held on Feb. 3rd, Dr. SAMUEL WEST, the President, being in the chair.

The discussion was reopened by Dr. H. D. ROLLESTON. His paper will be found in full on p. 378.

Dr. D. W. CARMALT JONES said that exponents of vaccine therapy, of which he was one, claimed that they were guided by a definite principle—that they were using a substance which could produce a definite physiological effect which assisted in removing a cause of disease, and which they used with considerably greater rational support than was possible for most drugs available for oral administration. No one with experience of vaccines claimed that he could control infection in any given case, but most of them were at least confident that the principles upon which they worked were sound ones, and that if the control of infections was ever possible it would arise out of the methods which they employed to-day. These principles indicated not only the scope but the limitations of the method, for organisms in any site did more or less destruction, leading to scars, deformities, loss of function, &c., and vaccines could do nothing for these conditions. It was essential that all sources of irritation, such as sequestra, pus, or other dead tissue or foreign substance, be removed. This was the first indication for accessory treatment, and its omission was a common cause of failure. Three further conditions must be observed: (1) That the correct organisms be used for the vaccine; (2) that suitable doses be injected; and (3) that the patient's tissues be capable of responding. His own experience was chiefly among out-patients or patients who had come to him for treatment, which had to be considered from the point of view of dose, and he was accustomed by necessity as well as by conviction to use small doses. He noted some results obtained in pyorrhœa alveolaris, bronchial asthma, and arthritis. He was satisfied that local improvement in the mouth in cases of gingivitis and pyorrhœa, and improvement in general health and digestion and in the incidence of obscure fascial and muscular pains were frequently obtained by the use of streptococcal vaccines, with the coöperation of the dentist. In asthma good results often followed vaccine treatment. He now preferred to use the organisms from the patient's own sputum. The asthma which was excited by an inflamed and infected bronchial mucous membrane was that which was amenable to this form of treatment. The irritable respiratory centre should not be forgotten. Gonococcal arthritis had given fair results in his experience. Rheumatoid arthritis was a disease of indeterminate bacteriology, and its treatment by vaccines was purely empirical. By using vaccines of organisms derived from gums, urine, and fæces sometimes good and even striking results were obtained. On the whole, he was fairly well pleased with the results of vaccine-therapy in chronic cases of arthritis. Cure was often impossible, but when patients persisted in treatment a good deal of relief was ultimately obtained in a fair proportion of cases.

Dr. NATHAN RAW dealt especially with the treatment of lobar and broncho-pneumonia. He had treated 207 cases by this means. Of 30 between the ages of 1 and 10, 28 recovered and 2 died; of 36 between the ages of 10 and 20, 30 recovered and 6 died; of 35 between the ages of 20 and 30, 31 recovered and 4 died; of 50 between the ages of 40 and 50, 42 recovered and 8 died; of 22 between the ages of 50 and 60, 16 recovered and 6 died; of 4 between the ages of 60 and 70, 1 recovered and 3 died. The total mortality was 16 per cent. He thought that the man with the best chance of recovery from acute pneumonia was he who possessed a sound circulatory system, good heart muscle, and good elasticity of blood-vessels, but there was need of something antagonistic to the pneumococci. The results he had obtained from the use of anti-pneumococcic serum were not encouraging. A vaccine to be valuable must be injected at the beginning of the

illness, and if used on the second or third day its effect was sometimes almost miraculous. Hence he had been compelled to use stock vaccines. In this way the treatment was under considerable disadvantage, but in spite of this it was very valuable. The cases treated did not include all his cases, as he did not use the vaccine in some mild ones where it was obviously uncalled for, nor in moribund cases. It was difficult to estimate the true value of the treatment, and one had to be guided by general impressions. Each case was treated also on orthodox lines. Alcohol was freely given if necessary, and an ice-bag was never used. The dose was 50 millions for adults, but for some 100 millions was used. He was convinced of its harmlessness, and had never noticed a bad effect. It was true that in a certain proportion there was no effect at all, but in others it caused a sudden drop of temperature. The effect on the pulse was always good, delirium was often relieved, and temporary natural sleep was frequently obtained. There was a notable absence of complications, and not a single case of empyema developed. He regarded it as a valuable aid in the treatment of pneumonia, but not as a specific remedy.

Mr. DOUGLAS HARMER spoke of the treatment of inflammatory conditions in the upper air passages by vaccines. Dr. M. H. Gordon alone had made more than 200 autogenous vaccines from his patients. Reactions both local and general were much more frequent than was generally supposed. The duration of immunity varied very greatly in different individuals. The more acute infections of the upper air passages were usually due to the streptococcus or pneumococcus, and in such cases large doses of vaccines should be given early and repeated. These requirements were possible since the introduction of sensitised vaccines, because they were less likely to make the patient worse than non-sensitised ones. In acute streptococcus infection doses of 100, 500, and 1000 millions could be given on three succeeding days, and the result was often remarkable. On the other hand, the pneumococcus cases had been very disappointing. With regard to colds, pharyngitis, and laryngitis, they had found them to be most often due to pneumococcus and micrococcus catarrhalis, or the pneumococcus and bacillus influenzæ in combination. There seemed evidence that vaccines would often cure them. There was also abundant evidence that vaccines would often cure an ordinary cold. In chronic sinusitis he had found that streptococcus and Friedländer vaccines gave good results, whilst vaccination with pneumococcus, B. influenzæ, staphylococcus, and coliform organisms had been valueless. In a series of 14 cases of atrophic rhinitis treated with vaccines of Friedländer's bacillus, there was nothing to suggest that the treatment had any curative value. His impression was that they had reached a point at which it was safe to say that vaccines had a definite curative value in some of the complaints they treated, and that better results could be obtained with some vaccines than with others. He recorded some instances of temporary ill-effect, but knew of no case which had been made permanently worse.

Dr. AGNES SAVILL said there was no doubt as to the good effect of an initial small dose of staphylococcus aureus for boils, and in long-standing recurring cases vaccines had done more than all other treatment. In folliculitis of the scalp in children a staphylococcus vaccine would improve immediately a condition in which local antiseptic and internal tonic treatment had been tried in vain. In sycosis the effect of this vaccine was sometimes marvellous, in others it failed. She had used the acne bacillus most. In comedones the acne bacillus yielded remarkable results in most cases, but when very large, red, angry papules and deep-seated pustules covered the face, vaccines would not cure but only ameliorate the condition. She had ceased to employ vaccines in the angry chronic acne, and treated the alimentary tract instead. The unique value of large doses of acne vaccine for seborrhœa oleosa and baldness due to, or accompanied by, its germ was discovered by her in 1908, and she had recorded 20 cases showing the beneficial effects and cures. She examined each case microscopically, and never gave a vaccine unless she found the micro-bacillus teeming. In only 4 out of 27 cases had she failed to check the disease.

Dr. DAVID N. NABARRO said he was convinced of the value of vaccine therapy in suitable cases. He had frequently had patients whom he had treated for chronic and recurring colds, for chronic naso-pharyngeal and bronchial catarrh, and for infections of the urinary tract return to him to have a fresh vaccine prepared because the previous one had done them so much good. They often failed to cure, but they could ameliorate the patient's condition. By means of vaccines one could reduce the number of pus cells and organisms in the urine in infections of the urinary tract, reduce the fever, and relieve the pain and other local symptoms. It was important, however, that the urine should be examined from time to time to ascertain if the same organism was the cause of the trouble. This re-examination of the material voided applied also to mucus from the nose or pharynx and to sputum. He then referred to two cases of streptococcal infection which he had treated with sensitised vaccines, and which he regarded as being benefited by them. He had used other sensitised vaccines than streptococcal, and considered them harmless in suitable doses.

Dr. W. BEZLY THORNE recorded three cases differing materially as to symptoms, and in some respects in regard to treatment, but having this in common, that having been brought within reasonable distance of recovery by measures of which pharmaceutic and dietetic treatment of alimentary toxæmia formed a part, there remained nevertheless conditions impairing the completeness and permanence of restoration to health which were not corrected until recourse was had to autogenous vaccines.

Lieutenant-Colonel R. H. ELLIOT, I.M.S., said he thought that much of the optic neuritis, optic atrophy, and iritis in the East was due to pyorrhœa, and excellent results were often obtained by vaccines. Staphylococcal vaccines gave good results in the large boils which were found there and also the rheumatic pains and asthma which accompanied them. He was told, however, that the anti-plague serum gave even better results, and he thought that there was something in vaccines beside the specific element.

The PRESIDENT summarised the discussion. He thought it might be concluded that vaccines were not of much use in those cases which had not been referred to particularly. He thought that the exclusion from the discussion of tuberculins and the use of vaccines for prophylaxis had been a wise provision. It appeared that in acute infections the results of vaccine therapy in the great majority of cases had been eminently disappointing, though strikingly valuable in a few. These few could not be held to establish the good effects of this form of treatment. Cases in which harm had followed had been observed in this group especially. Most of the cases belonged to the subacute or chronic category. The manner in which vaccines were employed generally throughout the country was essentially unscientific and could do little good. Another point which had been brought out was the importance of using also ordinary methods of treatment. It was difficult to compute the value of any therapeutic measure, and important to take into consideration the natural course of the untreated disease. There was therefore the need for the closest possible coöperation between the workers in the laboratory and those in the wards, a coöperation which should be hearty and without rivalry. The enthusiasm and hopes of the earlier workers had been largely tempered by later experience, and the haphazard use of vaccines in disease could only bring them into disrepute and retard progress.

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## SECTION OF THE HISTORY OF MEDICINE.

*Roman Medicine and Roman Medical Inscriptions found in Britain.—Medical Education and Qualifications of Oliver Goldsmith.—Early Eighteenth Century Treatises on Tropical Medicine.—Exhibition of Objects of Interest.*

A MEETING of this section was held on Jan. 28th, Sir WILLIAM OSLER, the President, being in the chair.

Dr. HENRY BARNES read a paper on Roman Medicine and Roman Medical Inscriptions found in Britain. Reference was first made to the revival of interest in medical history during the last 25 years as shown by numerous contributions to current medical literature. A short sketch was given of the foundation of the Temple of Æsculapius on the Insola Sacra at Rome, and the introduction of Greek medicine into the city. Four votive inscriptions found in the ruins of the temple were shown. A graphic account of the conditions of family medical practice taken from the "De re rusticâ" of the elder Cato was given and specimens of

incantations were exhibited. A brief account was also given of some of the early Greek physicians who migrated to Rome. Under the Empire a new order of medical practitioners came into existence. This was briefly referred to, and mention was made of the provision of medical officers of the army and navy. An illustration of a Roman altar, now in the Newcastle Museum, erected in memory of a *medicus cohortis* was shown. Several imperial physicians were mentioned, among them Hermogenes, physician to Hadrian, who dedicated an altar found at Chester in 1851; Scribonius Largus, who wrote a medical treatise when in attendance upon the Emperor Claudius; and Serenus Sammonicus, who attended the Emperor Severus in his Scottish campaign. The last named was one of the minor Latin poets and invented a cabalistic word used as a charm for a deadly form of fever. Specimens of this charm prepared according to the instructions of Serenus were exhibited. Illustrations of sculptured and inscribed stones of medical interest found in various parts of Britain were then shown. These consisted for the most part of dedications to Æsculapius. The first has a Greek inscription and was found at Maryport; it was erected by Aulus Egnatius, pastor, and dedicated to Asklepios. One found by Horsley has a Latin inscription on one side and a Greek one on the other; it is thought to have been a dedication by Titus Flavius Titianus to Æsculapius. A votive tablet containing two sculptured figures, one being Æsculapius and the other Salus, was next shown; it is a dedication by a physician to these deities. An engraving of an elaborately carved Roman altar now in the British Museum was then exhibited; it was a dedication to Æsculapius and his daughter Salus. A photograph of a Roman altar in the Carlisle Museum was also shown; it has on one side a jug and a snake, and on the other a patera and knife. It commemorates the restoration of a ruined building according to a vow, and is considered to have been a dedication to Æsculapius. Further dedications to the same deity found at Procolitia (on the Roman wall), in Greenwich Park, and near Kirby Lonsdale were mentioned. The discovery of the figure of the god Telesphorus at Birdoswald in 1851 was alluded to and an illustration shown. From these discoveries it was argued that the worship of Æsculapius was not unknown in these distant outposts of the Roman Empire. Donaria or votive offerings were then referred to, and some prints of donaria from the Sambon collection were shown, one illustrating a case of goitre and another an invalid feeding-cup. Some account was then given of the Rudge cup found in 1725, which is now the property of the Duke of Northumberland, who has had a recent photograph taken which was exhibited. An attempt was made to identify the places named on the cup which are considered to represent an itinerary, and the cup has probably been a votive offering at the well-known spa at Gilsland. A detailed account was then given of Roman medicine stamps found in Britain and photographs were shown. Eleven stamps of Roman oculists were described and the inscriptions translated. Finally, a quotation was given from Camden referring to the care and foresight exercised by the Roman soldiers, who during their occupation of the Roman wall "did plant everywhere in old time for their use certain medicinable herbs for to cure wounds."

—Dr. F. PARKES WEBER pointed out that many ancient physicians were accused of killing the more illustrious of their patients, and in all probability falsely.

Sir ERNEST CLARKE, F.S.A., read a paper in which he adduced a number of new facts as to the Medical Education and Qualifications of Oliver Goldsmith. The paper was illustrated by various original letters and other documents of the period of Goldsmith's life, and it appeared from it that there was no longer any necessity to ascribe Goldsmith's medical degree of M.B. to a foreign university, such as Leyden, or Louvain, or Padua, as had been done in the accepted biographies. It was known that Dr. Johnson, Dr. Percy (afterwards Bishop of Dromore), and Goldsmith had paid a visit to Oxford together in February, 1769; and though there was nothing on the subject in the official University records, which were kept very carelessly at the time, examination recently made at the instance of Sir William Osler of the local newspapers of the period had revealed this entry in *Jackson's Oxford Journal* for Saturday, Feb. 18th, 1769: "Yesterday Oliver Goldsmith, Esq., Bachelor of Physick in the University of Dublin, Author of '*The Traveller: a Poem*,' of '*The Present State of Polite Learning in Europe*,' and of several other learned and ingenious Performances, was admitted in Congregation to the same Degree in this University." It was obvious, therefore, that Oxford had given to Goldsmith on Feb. 17th, 1769, an *ad eundem gradum* degree of M.B. because he was already a medical graduate of Dublin. It had not been possible, owing to the imperfections of the Dublin registers, to confirm this positively from the Irish University records; but Goldsmith was already a Bachelor of Arts of Dublin (Feb. 27th, 1749), and under the statutes would have been entitled on compliance with certain requirements to admission to the degree of Bachelor of Physic at the expiration of three years thereafter. It appeared probable from various references quoted by Sir Ernest Clarke from family letters and other documents that, contrary to what was commonly supposed, Goldsmith commenced to study anatomy at Dublin, resumed it after a period of idleness when he went to Edinburgh in 1752, and continued his medical studies in an intermittent way at Leyden and other foreign universities. The suggestion made was that some time after he returned to England from his continental wanderings in 1756 he may have applied to his *alma mater* to grant him the degree of Bachelor of Physic *in absentiâ*, and that his application was granted. At any rate he called himself M.B. in an agreement with James Dodsley written in his own hand and dated March 31st, 1763 (now at the British Museum); and in the first book which had his name on the title page—viz., "The Traveller," published on Dec. 19th, 1764—he was described as "Oliver Goldsmith, M.B."—Mr. D'ARCY POWER joined in the congratulations to Sir Ernest Clarke for the admirable manner in which he had stated the case for Oliver Goldsmith. The whole subject was not yet settled, but it was clear that Goldsmith was entitled to use the letters M.B. after his name. Sir Ernest Clarke had left one part of his subject untouched in considering Dr. Goldsmith in his medical aspects, and that was in regard to his last illness. Goldsmith went to Bath in 1770–71, possibly for some renal trouble, which would in all probability have been diagnosed as "gouty kidney." He improved, but in 1773 he was suffering from dysuria. He again improved and went to a farmhouse at Hyde, near Edgeware. Here he was taken ill on March 25th, 1774, becoming feverish, again suffering from dysuria, and with so weak a pulse that his medical attendant became alarmed and sent for further advice. He improved a little, but persisted in dosing himself with James's powder—a preparation of antimony—in which he had great faith. On Sunday, April 3rd, he was in a sound and calm sleep at midnight, but it is evident that his condition caused anxiety, for in spite of this "the gentleman who attended him" was on the alert all night, and at 4 A.M. he was found to be "in strong convulsions which continued without intermission until his death" at 4.45 A.M. on April 4th, 1774. Mr. Power said that he had submitted the report of the case to his friend Dr. Philip Hamill, who returns his death certificate, "Old pyelitis. B. coli septicæmia complicated by excess of antimony in James's powders."

Dr. ALBERT J. CHALMERS and Captain R. G. ARCHIBALD, R.A.M.C., contributed notes on Two Early Eighteenth Century Treatises on Tropical Medicine. In the absence of the authors at the Wellcome Tropical Research Laboratories at Khartoum the paper was read by the senior honorary secretary. The two books were the "Traité des Maladies particulières aux Pays Orientaux et dans la route et de leurs Remèdes," par Mr. D. L. F., Docteur en Médecine, Rotterdam, 1726, and "The Sea Surgeon or the Guinea Man's Vade Mecum," by T. Aubrey, M.D., London, 1729. Dr. Chalmers and Captain Archibald believed that these two works extend our knowledge of the history of epidemic gangrenous rectitis by about 170 years and that of dengue fever by about 50 years. They are also interesting in the fact that they fail to refer to the jigger, and this is in accordance with the belief that the pest was not introduced into West Africa from Brazil until the middle of the last century.

Mr. W. DE COURCY PRIDEAUX showed: 1. A rubbing of the memorial to Nathaniel Highmore, writer and anatomist (1613–85) which is at present hidden below the oak chancel floor of Purse Caundle church, of which parish his father and other relatives were rectors from 1603 to 1717. Highmore graduated M.D. at the University of Oxford in 1642. He practised with success at Sherborne, and was for many years J.P. for the county of Dorset.

2. A warrant for the burial of a *felo-de-se* at a cross way. It was signed by the coroner, and ran: "I do, according to mine office, condemn ye Corps of the felon to be buried at a Cross way, a stake struck through him and so forth—in terrorem, &c. Your humble Servt. John Clarke Jan. 8, 1734."

Mr. J. C. S. THOMPSON showed various objects of interest from the Wellcome Historical Medical Museum, and amongst others a terracotta donarium representing a woman in the seventh month of pregnancy, found at Brandon in Suffolk; a leaden ointment box; and the earliest woodcut of a stegomyia, dated 1648.

## SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

### *Enlargement of the Spleen in Children.*

THIS section, Dr. LEONARD GUTHRIE, the President, being in the chair, held recently an interesting discussion on Enlargement of the Spleen in Children. This was opened by Dr. ROBERT HUTCHISON and Sir JOHN BLAND-SUTTON.

Dr. HUTCHISON suggested the following grouping of enlargements of the spleen met with in children in this country:—1. Tumours: neoplasms, endothelioma, cysts, &c. 2. Infective: typhoid, ulcerative endocarditis, malaria, tuberculosis, lymphadenoma, chronic arthritis. 3. Chronic venous congestion. 4. Metabolic disorders: rickets, lardaceous disease. 5. Blood diseases: leukæmias, splenic anæmia of infancy, chloroma, congenital anæmia with splenomegaly and jaundice. 6. Splenic anæmia of the adult type. 7. Syphilitic. 8. Splenomegaly with acholuric jaundice. 9. Splenomegaly with cirrhosis of liver: (*a*) portal cirrhosis, alcoholic and other forms; (*b*) biliary cirrhosis; (*c*) syphilitic cirrhosis; (*d*) Banti's disease; and (*e*) congenital obliteration of bile-ducts. Dr. Hutchison pointed out that the classification was mainly a clinical one. He then made a few remarks explanatory of each group. With regard to Group 5, he pointed out that chronic myeloid leukæmia, which causes so great a degree of enlargement of the spleen in adults, was a rare disease in childhood, but acute myeloid and lymphatic leukæmia were not very uncommon and were attended by a considerable degree of splenomegaly. Closely allied to these was the enlargement met with in chloroma. By far the commonest blood disorder in early childhood, characterised by marked enlargement of the spleen was the so-called pseudo-leukæmia of von Jaksch (splenic anæmia of infancy). The pathological problems which arose in connexion with enlargement of the spleen in these cases in children did not differ from the kindred problems which arose in the case of adults. Group 6: Cases were sometimes met with in later childhood which were indistinguishable from the splenic anæmia of adults. Group 9: Enlargement of the spleen with cirrhosis was not infrequent. Several varieties might be distinguished: (*a*) The cirrhosis might be of the multilobular type; some cases were alcoholic, but probably other poisons produced a similar result; (*b*) the cirrhosis might be of the monolobular variety (Hanot type); (*c*) the cirrhosis might be syphilitic; (*d*) enlargement of the spleen might exist for years and be followed by a multilobular cirrhosis (Banti's disease); and (*e*) cirrhosis might depend upon congenital malformation of the bile-ducts. As regards pathology, (*a*) What was the cause of the enlargement of the spleen? (*b*) What was its relation to the pathology of the disease as a whole, and especially was the spleen playing an active or passive part? It was reasonably certain that the cause of the enlargement was not the same in all the groups, but it was particularly necessary to inquire what part was played by syphilis in its production. Dr. Hutchison suggested that in Groups (6) and (8) syphilis played no part, and not in cases of cirrhosis except where the cirrhosis was of the well-known syphilitic variety. As to the ultimate cause of the enlargement in acholuric jaundice, in splenic anæmia of the adult type, in portal and biliary cirrhosis, and congenital obliteration of the bile-ducts, he had no suggestions to offer. The results of splenectomy were now enabling one to say whether the part played by the spleen was active or passive. In Groups (6) and (8) the spleen was in some way the cause of the other features in the clinical picture. As regards therapeutics, he suggested that splenectomy was indicated in Groups (1), (6), and (8). It would generally be admitted that it was entirely inadmissible in Group (5).

Sir JOHN BLAND-SUTTON first discussed the functions of the spleen. He pointed out the rapid increase in size after birth, and the facility with which it became engorged in fevers and other infantile disorders, especially rickets, suggested that it had important functions at the commencement of life. The enlarged spleen associated with numerical reduction of the red corpuscles in the disease of children known as splenic anæmia was due to functional over-activity of the spleen. When its destructive activity was excessive harmful products of this over-action accumulated in the blood, producing in addition to anæmia acholuric jaundice. He had removed the spleen of a young woman, aged 22 years, for acholuric jaundice with a most satisfactory result. In children the spleen could certainly be removed without interfering with their growth and development. Removal of the spleen in children suffering from splenic anæmia was a life-saving measure. In 1895 he excised the spleen from a girl, aged 5 years, for splenic anæmia. Sutherland and Burghard's patients were aged 6 and 12 years respectively. Hutchinson removed the spleen from a boy aged 7 years. Makins removed the spleen from a girl aged 9 years. He (Sir John Bland-Sutton) removed an enormous spleen from a girl, aged 17 years, suffering from splenic anæmia and jaundice. In all these cases the result of the operation was a complete success. He recommended opening the abdomen in the left linea semilunaris. The suspensory ligament (phreno-colic) was snipped with scissors and the spleen then slipped out quite easily. The vessels were secured with hæmostatic forceps and divided with the gastro-splenic omentum close to the spleen. After the organ had been excised the vessels were tied with silk. He then emphasised the importance of a study of the microscopic features of the blood when there was enlargement of the spleen. To-day any abdominal swelling resembling an enlarged spleen suggested a blood count, and the surgeon was unwise who removed a spleen before making a microscopic examination of the blood. The removal of a leukæmic spleen always ended in disaster.

Dr. G. A. SUTHERLAND pointed out that at one time "primary" diseases of the spleen were not recognised. At the present time, instead of there being no recognised primary diseases of the spleen it would appear that the number of them was increasing, as judged by the results of splenectomy for the relief or cure of various clinical phenomena. Here, as in other cases, surgical procedures had gone ahead of pathological knowledge, for it was not yet known what the exact nature of the splenic disease had been.

Dr. F. J. POYNTON limited his remarks to cases of family acholuric jaundice. He had four families under observation, including 12 individuals, some of whom had been under observation for some years. He believed that he was among the first to point out in this country that the condition of yellowness might alternate with that of anæmia, and that an enlarged spleen with an anæmia so little tinged with a yellow colour as to be easily overlooked might occur in some members of these families.

Dr. J. HUGH THURSFIELD said that the type of disease known as splenic anæmia was really a congeries of cases due to different causes. From that group there had been separated off the group of acholuric jaundice. But even that was not a homogeneous group. The causation remained obscure, though it was certainly not syphilis. With regard to the pathology of the various cirrhoses he did not think that any advance had been made. At present there was no method by which one could examine the blood of the living patient and demonstrate the hæmolysins causing the anæmia or the pigmentation as the case might be. Still he did not despair of some such method being found.

Mr. PHILIP TURNER mentioned a case of a boy, aged 5 years, whose spleen he had removed. He was very wasted, the skin had a yellow waxy appearance, and the spleen was much enlarged, filling the left iliac fossa. Anæmia was intense, red corpuscles being 1,500,000 and hæmoglobin 25 per cent. Dr. French, under whose care the child was, had diagnosed von Jaksch's anæmia. In spite of all treatment the child got steadily worse, and removal of the spleen on the lines described by Sir John Bland-Sutton was decided upon. The result was remarkable; within three months the boy was practically well.

Dr. T. S. LUKIS discussed the question of the fragility of the corpuscles. Whatever the vital staining granules were, they bore a definite relation to blood destruction, and particularly to blood regeneration. One found them in cases which had surgical hæmorrhages; they appeared in the

blood for a time during regeneration, and disappeared when the blood returned to normal. In 7 cases of acholuric jaundice he had found a very high percentage of these vital staining cells.

Dr. F. PARKES WEBER thought that with the help of further research the following classification might be possible: (1) Enlargements of the spleen in which the enlargement and structural or functional change was serving some useful purpose; (2) enlargements due to the presence of tumours; (3) enlargements or alterations due to the local presence of microbes; and (4) enlargements or alterations connected with disorder or excess in the functional activity of the splenic tissue.

Dr. HUTCHISON and Sir JOHN BLAND-SUTTON then replied.

## SECTION OF DERMATOLOGY.

*Exhibition of Cases.*

A MEETING of this section was held on Jan. 8th, Dr. J. J. PRINGLE, the President, being in the chair.

Dr. HENRY MACCORMAC exhibited a Case for Diagnosis in a man, aged 67, who presented extensive areas of itching, pigmented, papular skin, with much lichenification, over the neck, thorax, abdomen, arms, and thighs, of about 18 months' duration, the mucous membranes being unaffected. The blood count was normal, and there was no enlargement of spleen or lymphatic glands. Microscopical examination revealed merely collections of round cells in the sub-epidermic layers.—The PRESIDENT had never seen an identical case, and thought the disease one *sui generis*. The periodical variations in severity, the itching, the urticaria, the coarse lichenification, all seemed to connect it with the urticarial group of diseases. The nodular papules more closely resembled those of true prurigo than any other disease, and he was inclined to categorise it as a senile form of prurigo. A hurried search into recent French literature had failed to discover any mention of a similar condition.—Dr. A. WHITFIELD suggested the possibility of the disease being a prodromal eruption of leukæmia or pseudo-leukæmia, but, on the whole, agreed with the President's observations.—Dr. J. H. SEQUEIRA associated it with the nodular form of prurigo.—Dr. J. M. H. MACLEOD agreed with the views of the President in considering it a toxic prurigo.—Dr. G. PERNET thought it might be an example of Besnier's *prurigo diathésique*.—Dr. G. R. WARD referred to two recorded cases in which the appearance of cutaneous nodules had preceded the manifestation of leukæmia.—Dr. A. DOUGLAS HEATH compared the condition to the pruriginous eruption sometimes accompanying jaundice.—Dr. F. PARKES WEBER remarked that the cutaneous nodules of pseudo-leukæmic prurigo were never so numerous and closely aggregated as in the case exhibited.

Dr. SEQUEIRA brought forward an unusual case of Pityriasis Rubra Pilaris in a girl aged 9. She had been admitted to a fever hospital in September, 1913, for scarlet fever, diagnosed by most competent authorities, which ran its usual course and was followed by characteristic desquamation, after which the present eruption made its appearance. The lesions were atypical in distribution, the posterior aspects of the proximal phalanges of the fingers being hardly if at all affected. The eruption on the front of the chest closely resembled lichen planus, but was of characteristic salmon-pink colour. Acuminate papules were present over the abdomen and back, and the desquamative condition of the face and scalp confirmed the diagnosis. The child had had an eruption of pityriasis rubra pilaris in the previous year.—The PRESIDENT agreed with the exhibitor's diagnosis, but said that the case might easily elude the most experienced observer.—Dr. HALDIN D. DAVIS had observed two cases of this disease, preceded by high fever, erythrodermia, and desquamation, closely resembling scarlet fever. He understood that this course of events had been recorded by others.—Dr. S. E. DORE had observed a typical case of pityriasis rubra pilaris in a young woman in whom the preliminary erythematous stage was well marked and of long duration, and which gradually emerged into a generalised sclerodermia.

Dr. W. KNOWSLEY SIBLEY exhibited a Tuberculide in a girl, aged 13, who had apparently suffered from lupus of the nose at the age of 4 years, vigorously treated with X rays, causing extensive ulceration of the face. Two years afterwards the disease began to spread slowly over the entire face and neck both in front and behind. The lesions consisted of brown nodules, very closely aggregated into patches, which terminated in an abrupt margin a little below the level of the clavicles in front and extended like a collar round the neck. There were old ectropion and much disfigurement of the face, but the more recent lesions had not ulcerated.—An animated discussion ensued.—Dr. WHITFIELD protested against the nomenclature adopted by the exhibitor, and considered that the case was a typical lupus vulgaris. The name tuberculide was originally designed for and applied to tuberculous cutaneous manifestations distributed through the blood stream.—Dr. SEQUEIRA agreed entirely with the views expressed by Dr. Whitfield, and said that the case exhibited was a striking exemplification of the local extension of lupus vulgaris by satellites.—Dr. MACLEOD remarked that many cases previously regarded as toxi-tuberculides were now proven to be bacillary. He thought the term tuberculide might soon be dispensed with.—Dr. A. M. H. GRAY said that tubercle bacilli were now being found in lesions formerly regarded as tuberculides.—Dr. DORE agreed generally with Dr. Whitfield's observations as regards nomenclature, but pointed out that the condition usually termed "multiple lupus"—e.g., after measles—was the result of blood infection.—The PRESIDENT concurred with all previous speakers in deprecating the nomenclature adopted by the exhibitor, and thought that the matter was of practical importance and of more than mere academic interest. He hoped that the section would set the seal of its approbation upon the interpretation of the term tuberculide as being the result of a systemic infection and not of a mere local tuberculous extension.—Dr. KNOWSLEY SIBLEY, in reply, said that he considered the nodules as examples of pigmentary tuberculides and not as lupus.

Dr. KNOWSLEY SIBLEY also showed a boy, aged 16, who presented an Exuberant Ulcer of the Left Ala Nasi of six months' duration, with a provisional diagnosis of epithelioma. There was scarring of the soft palate and posterior pharyngeal wall, the uvula and epiglottis had been destroyed by ulceration, and there were pear-shaped swelling of the arytenoids and ulceration of the vocal cords. No tubercle bacilli had been found in the expectoration, and there were no physical signs of pulmonary disease. A Wassermann reaction taken some time ago was stated to have been negative, but a similar test recently applied was positive. A section taken from the raised edge under the left nostril showed marked prolongation downwards of the epithelium with distinct cell-nesting. No giant cells or tubercle bacilli were detected.—Dr. WHITFIELD could find no convincing evidence, either clinical or microscopical, of epithelioma, and all symptoms pointed towards congenital syphilis.—Dr. MACCORMAC attributed the somewhat epitheliomatous appearances of the sections to the oblique direction in which they were cut.—Dr. SEQUEIRA diagnosed the case as one of congenital syphilis and added that epithelioma very seldom supervened upon tuberculous or syphilitic lesions of such short duration.—Dr. HALDIN DAVIS considered the disease to be lupus and regarded the Wassermann test as fallacious.—Dr. DOUGLAS HEATH also diagnosed lupus and Dr. MACLEOD and Dr. DORE late hereditary syphilis.—Dr. C. DUDLEY CORBETT thought that the beneficial effect of X-rays favoured the diagnosis of lupus.—The PRESIDENT was of opinion that the bulk of evidence strongly favoured the diagnosis of congenital syphilis and suggested an injection of salvarsan as a diagnostic test.—Dr. KNOWSLEY SIBLEY accepted the President's suggestion and promised to bring the case to a future meeting.

Dr. PERNET brought forward a typical case of Extensive Acne Varioliformis in a woman and drew attention to the rarity of the disease in the female sex.—The case was discussed by Dr. A. EDDOWES and the PRESIDENT.

Dr. GRAY showed a case of Generalised Lupus Erythematosus, occurring after an attack of pneumonia, in which hæmorrhagic bullæ had been a prominent feature of the eruption. Contrary to expectation, almost complete recovery had taken place, although the only treatment adopted had been rest in bed and small doses of quinine.—Dr. SEQUEIRA recalled the fact that in three of his fatal cases non-tuberculous pleurisy had been present.—After some observations of Dr. DOUGLAS HEATH, the PRESIDENT commented upon the unusually favourable issue of an example of a disease almost invariably fatal. All the patients under his own care had died, most of them from

disseminated tuberculosis. A typical case of the condition, now moribund in hospital, had presented for the past four months all the blood changes said to be characteristic of pernicious anæmia as well as some evidences of tuberculosis.

Dr. GRAY also showed a Papulo-necrotic Tuberculide on the hands of a girl, aged 21, of four years' duration, who had had several operations for tuberculous glands of the neck.—Dr. KNOWSLEY SIBLEY questioned whether a distinction could be drawn between scrofulodermatous lupus and the tuberculides.—Dr. WHITFIELD remarked that the case illustrated to perfection the distinction between the two conditions, and commented upon the unfavourable prognosis and indefinitely prolonged duration of tuberculides such as the case exhibited.

Dr. WHITFIELD demonstrated a case of Cutaneous Atrophy with Comedo in a boy, aged 7, which dated from early infancy. Comedones were observed soon after birth, and the patches of abnormal skin were situated upon the left side of the neck, left temple, and in the scalp. No microbacilli had been found in the extracted comedones. He considered the case to be a keratoid nævus; that the atrophy was primary, probably congenital; and that the comedo-like bodies were merely irregular cornifications. A similar case has been recorded by Dr. H. G. Adamson.—The case was commented upon by Dr. DORE, Dr. EDDOWES, and the PRESIDENT.

## GLASGOW MEDICO-CHIRURGICAL SOCIETY.

*Chronic Intestinal Stasis.*

A MEETING of this society was held on Jan. 16th, Mr. A. ERNEST MAYLARD, the President, being in the chair.

Sir W. ARBUTHNOT LANE delivered a lecture on Chronic Intestinal Stasis. By chronic intestinal stasis was meant such a delay in a portion or portions of the gastro-intestinal tract as resulted in the absorption into the circulation of more toxic matter than the organs whose functions were to convert, convey, and eliminate them could deal with. Its mechanism was the following. The condition was primarily a stasis in the large intestine, and was most marked in the cæcum, ascending colon, and sigmoid. The sigmoid, with its solid contents, tended to pull into the pelvis, and at an early date resistances to this prolapse were crystallised in the form of bands attached to the outer surface of the meso-sigmoid, fixing the mesentery and later the sigmoid as a straight rigid tube to the floor of the iliac fossa. Among the disastrous consequences which sometimes followed the development of these bands were involvement of the ovary and Fallopian tube in adhesions, the production of ovarian cysts, wasting of the muscle wall of the bowel, obstruction of the bowel, the formation of hernial diverticula, and inflammatory changes, with possibly cancerous infection later. The cæcum tended to be displaced by hydraulic pressure in the erect posture into the true pelvis, and this tendency was specially marked in women on account of their longer abdomen and bigger pelvis. Here also resistances were developed in the form of bands or membranes running in two directions, one upwards and outwards to be attached to the adjacent peritoneum, and the other in and along the posterior wall of the mesentery which held up the termination of the ileum. In either of these bands the appendix might be involved, with resulting "appendicitis." By the latter band the ileum was not only kinked at one point, but was also twisted on itself so as to be still further occluded, so that the passage of its contents into the cæcum was obstructed, with the following results. Material accumulated in the small intestine and exerted a drag upon the vertically placed termination of the duodenum. The duodenum in consequence dilated and changes took place in its mucous membrane, which were exaggerated by the infection of the intestinal contents resulting from their delay. Engorgement of the mucous membrane was followed by inflammation, abrasion, and ulceration. The hepatic and pancreatic ducts were also infected, and changes of an inflammatory, and later of a cancerous, nature developed in the pancreas. Gall-stones were formed in the gall-bladder which might produce cancer, and the infection of the hepatic ducts changed the secreting power of the liver. Spasm of the pylorus developed to prevent the passage of the compressed duodenal contents back into the stomach, while the contents of the stomach was dammed back and changes consequent on gastric distension resulted—degenerative and inflammatory changes in the mucous membrane, with, later, ulceration and cancer. Stasis resulted in the absorption into the circulation of an excess of toxic products, which produced degenerative changes in every tissue and organ. If operations on the drainage scheme had done nothing more than demonstrate the damage done by these poisons, the remarkable power of repair which the tissues exhibited on being freed from their malign influence, and the extraordinary improvement in the function of every organ after operation, they would have been fully justified. Thus, the pigmentation of the skin and the coldness, blueness, and clamminess of the hands which characterised patients with chronic stasis disappeared rapidly after operation. In so-called Bright's disease, which was merely a product of chronic intestinal stasis, the exclusion of the large bowel was followed by an improvement in functioning as extraordinary as it was rapid. In female patients suffering from stasis the breast was often indurated and knobby; if the supply of toxins were eliminated a soft, healthy organ resulted. A healthy breast in a subject showing no evidence of stasis did not become cancerous. The influence of these toxins on the nervous system was illustrated by the case of a woman who had been confined to bed for many months, and whose mental condition was such that she was regarded by many as an imbecile. Within a few weeks of the removal of the large bowel she became a happy, active, intelligent woman, and has since lived usefully, earning her living. A woman who had suffered for nine years from epileptiform neuralgia of the right fifth nerve was sent from South Africa to have the Gasserian ganglion removed. She was definitely static, and her symptoms varied with her toxicity. She was short-circuited, with the result that all symptoms disappeared, and her general health and weight improved rapidly. In another patient, a man, intense headaches associated with vomiting, suggestive of cerebral tumour, disappeared abruptly after an ileo-colostomy. Removal of the large bowel had been followed by very rapid subsidence of a large adenoma of the thyroid, and typical symptoms of exophthalmic goitre of long standing associated with intestinal stasis had rapidly and permanently disappeared in other cases. The extraordinary improvement that resulted from short-circuiting and the disconnexion or removal of the large bowel did not mean that the colon was the chief source from which toxins were absorbed in excess. The improvement was largely due to the fact that the evacuation of the small intestine was facilitated by its introduction into the pelvic colon, so that the infection of its contents by organisms which grew in the stagnating material in the large intestine ceased abruptly, and the production and absorption of toxins therefore no longer took place.

ULSTER MEDICAL SOCIETY.—A meeting of this society was held in the Medical Institute, Belfast, on Jan. 22nd, Mr. A. B. Mitchell, the President, being in the chair.—A discussion on Syphilis and its Treatment by Salvarsan was introduced by Sir Thomas Myles (Dublin). He treated the subject first from a historical point of view, making special reference to Shakespeare (who, he said, some believed had suffered from the disease) and Voltaire, and mentioned that while early in its history syphilis had been called the "French disease," it was known to the peasants of the West of Ireland as the "bad disorder." It was curious that while some medical men said they saw little of the complaint, others indicated they had a great deal of it in their practice, facts easily explained according to the class of people seen by them. Sir Thomas Myles thought, considering the prevalence of the complaint, comparatively few cases of its attacking the nervous system (locomotor ataxia, &c.) after all occurred; but he believed that syphilitic disease of the nervous system was very intractable. As to the Wassermann reaction, considering its uncertainty, sometimes it was said to be positive, while, again, it was reported negative, Sir Thomas Myles averred he put little belief in its use. He spoke very highly of salvarsan, which he regarded as a wonderful compound, especially in the chronic throat and nose lesions of the complaint, and laid down very clear and accurate rules for its use, referring to the kidneys, eyes, &c.—Dr. Thomas Houston gave an account of

a series of very carefully observed cases in which the Wassermann reaction had been of the utmost service, and showed that it was just in the doubtful cases—where the clinical signs of syphilis failed—that it was specially of value, both as an aid to diagnosis and as a guide to the use of salvarsan. He narrated one very striking case in which—in a medical man who had accidentally acquired the disease in the course of his work—the Wassermann reaction showed that what was thought to be a septic sore on the finger was really a specific one. Further on in this case the nervous system was so far involved that convulsions and coma occurred, both of which rapidly cleared up by the use of salvarsan.—Sir John Byers, referring to the curious names given to syphilis, said this circumstance occurred in many other complaints; for example, in "The Life of Mary Queen of Scots," by Chalmers, a letter written on Nov. 30th, 1562, by Randolph, who was Queen Elizabeth's ambassador to the Scotch Court at Edinburgh, states that Queen Mary, immediately on her arrival, "fell acquaynted with a new disease that is common in this towne, called here the *newe acquayntance*." This is supposed to have been influenza. Sir John Byers said it was generally agreed that among the occupants of the old leper hospitals, which formerly were built round the eastern and southern seaboards of Ireland, there were many cases of syphilis. He thought the Wassermann reaction was an incalculably valuable diagnostic sign. It had completely explained "Colles's law," and he showed that he had been led by its positive condition in a patient with no clinical signs of syphilis to advise against a wet nurse being employed to foster her child. Again, by its presence in a pregnant woman we had clear scientific evidence to warrant us in giving salvarsan combined with mercury, instead of being guided by mere empirical experience. He directed special attention to the existence, often in a latent form, of syphilis in women, who were, as a rule, not treated at all properly in comparison to men, and said that in some cases of intractable obscure disease in women the presence of a positive reaction had not only cleared up the diagnosis but had suggested the proper line of treatment. He could not agree that in syphilis affections of the nervous system were comparatively rare; indeed, one of the reasons for the very early diagnosis of the primary sore, by showing the presence in it of the spirochæta, was to prevent, by the use of salvarsan and mercury, the early infection of the central nervous system. Finally, he believed the diagnosis by the Wassermann reaction of the presence of latent syphilis in some married women, followed by salvarsan and mercury, would lead to a lowering of the infantile mortality in the first month after birth.—Professor T. Sinclair gave his experience in support of the Wassermann reaction and of the salvarsan treatment, and mentioned one case in which a train of very suspicious nervous symptoms had arisen after the use of salvarsan, all of which, however, had subsequently cleared up.—Dr. W. Calwell described a number of cases successfully treated by him with salvarsan, and gave details of a pulmonary case, simulating phthisis, in which the real diagnosis was established by the Wassermann test, and in which recovery followed the use of the salvarsan and mercury treatment. He also described a syphilitic case with optic neuritis in which notwithstanding salvarsan was successfully given.—Dr. J. C. Rankin also spoke highly of the Wassermann test, and Dr. C. G. Lowry mentioned that an examination of 40 women by the Wassermann test at the Ulster Hospital for Women supported Dr. A. Louise McIlroy's Glasgow statistics as to the prevalence of syphilis among women.—Mr. John O'Doherty having pointed out that his practice was to inject salvarsan subcutaneously, mixed with tap water, under the left scapula, Sir Thomas Myles replied.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held at the Royal Infirmary on Jan. 20th, Dr. J. C. Sykes being in the chair.—Mr. W. Appleyard read notes on a case of Nerve Deafness following the use of salvarsan in a syphilitic patient. The patient, a young man, received an injection of salvarsan about the middle of October, 1913. Six weeks later he became totally deaf in both ears. A week later he was dizzy and had nystagmus on looking both to right and left. The rotatory and caloric tests showed that the vestibular branch of the eighth nerve was also affected, though not totally destroyed. Both drums were normal, as also was his vision. There was no optic atrophy. Mr. Appleyard thought that the deafness was most likely due to the salvarsan and *not* to the syphilis.—The case was discussed by Dr. F. W. Eurich and Dr. S. Lodge.—Mr. W. H. Hooton read a paper on X Ray Examination of the Alimentary Canal (with lantern illustrations). Since bismuth came into use for the X ray examination of the alimentary canal in 1897 enormous strides had been made, and to-day they had a valuable addition to their methods of diagnosis in alimentary disorders. Beginning with the œsophagus Mr. Hooton showed, by means of lantern slides, the difference between cardiospasm, malignant stricture, and fibrous stricture, and also the picture produced by the œsophageal diverticulum. Turning to the stomach, he showed slides of a normal stomach, an atonic dilated stomach, a case of extreme pyloric obstruction, and an hour-glass stomach. In duodenal ulcer the food appears to be delayed in the first part of the duodenum, which is a distinctive feature of this particular disease. In addition Mr. Hooton showed slides from various cases of intestinal obstruction.—The paper was discussed by Dr. R. A. R. Lankester, Dr. Lodge, Dr. Eurich, and Dr. A. C. F. Rabagliati.—Mr. J. Phillips read a paper on Dyspareunia and its surgical treatment. Dyspareunia was a much more frequent and important symptom than most practitioners imagined. Very insignificant space was given to the subject in the text-books. This was not a subject which women cared to talk about, and often went for years undiscovered. Experience showed that quite a number of women suffered more or less acute pain during coitus, that this condition underlay many a case of otherwise unaccountable neurosis, and that it nearly always depended on some pathological lesion, which, if properly diagnosed and treated, could generally be cured. The cause might be (*a*) at the vaginal entrance (e.g., unruptured hymen, fissure of the hymen, kraurosis vulvæ); (*b*) in the vagina itself (e.g., vaginismus, and a very short vagina); (*c*) above the vagina (e.g., retroflexed uterus, prolapsed ovary, ovarian cyst, ovario-salpingitis, parturition trauma). Mr. Phillips described many interesting cases of the above-mentioned causes of dyspareunia, most of them showing particularly the difficulties surrounding them and the comparatively easy treatment once the cause of the trouble had been discovered.

LIVERPOOL MEDICAL INSTITUTION.—A meeting of this society was held on Jan. 22nd, Dr. E. W. Hope, the President, being in the chair.—Mr. A. P. H. Simpson related a case of Faulty Metabolism which had resulted from panhysterectomy. There were marked changes in almost every joint, examination showed a deficiency in calcium in the blood, and the blood pressure was low. The patient was treated with extract of the pituitary gland and calcium lactate with marked success.—Dr. W. Blair Bell and Sir James Barr discussed the case.—Mr. R. W. Murray, in a paper on the Geographical Distribution of Appendicitis, sought for an explanation of the change in type and the increasing virulence and frequency of this disease. He had been in correspondence with medical men all over the world, and the universal opinion was that natives were practically immune so long as they continued to live on their ordinary simple diet. The more complex the diet the more prone was an individual to appendicitis, and any excess in the saturated fats was an important predisposing factor. The increased frequency of appendicitis was the punishment of luxury, the gastro-intestinal arrangements being unequal to the requirements of the twentieth century.—The President pointed out that, so far as this disease was concerned, the area of civilisation was coterminous with that of the surgeon.—Mr. F. T. Paul referred to the bodies found in diverticula of the intestine composed of calcium soaps.—Dr. T. F. Young, Mr. G. P. Newbolt, Dr. J. R. Logan, Mr. R. C. Dun, and Dr. A. Stookes also joined in discussing the paper.—Dr. Claude Rundle read a short paper on Induced Pneumothorax in the Treatment of Pulmonary Tuberculosis. He referred to the fact that Dr. James Carson, of Liverpool, was the pioneer and originator of this form of treatment, and had prophesied a great future for it. Dr. Rundle's communication was based on the results of the treatment in 21 cases with 250 injections without serious complications. He strongly advocated this form of treatment in cases of moderate severity where the involvement of the lung was partial and mainly unilateral. He considered the improvement was greater than that following on the administration of tuberculin. The difficulties met with were adhesions, sub-diaphragmatic emphysema and ballooning of the

scrotum, pyopneumothorax due to faulty technique, sudden death might occur, and dyspnœa and distress. In his experience pain on inserting the needle was the greatest difficulty.—Dr. A. Adams reminded the meeting that Mr. Bickersteth was the surgeon who assisted Dr. James Carson in his first two cases. He (Dr. Adams) had six patients under this treatment, and he employed quinine and urea as a local anæsthetic.—Sir James Barr saw no reason why air should not be used instead of nitrogen. He questioned the value of induced pneumothorax.—Dr. S. W. McLellan, Dr. P. Hick, and Dr. John Hay also spoke.

HARVEIAN SOCIETY OF LONDON.—A meeting of this society was held on Jan. 29th at St. Mary's Hospital, Mr. Jackson Clarke, the President, being in the chair.—The following clinical cases were shown:—Dr. W. H. Willcox: (1) A case of Raynaud's Disease: (2) Tracheotomy after poisoning with glacial acetic acid; (3) Aneurysm of the Arch of the Aorta; and (4) Pituitary Tumour.—Sir John Broadbent: (1) Splenomedullary Leukæmia; and (2) Friedreich's Ataxy associated with congenital heart disease.—Mr. V. Warren Low: (1) Aneurysm of the External Iliac Artery, one month after ligation; (2) Aneurysm of the Popliteal Artery, also one month after ligation; (3) Excision of the Clavicle for neoplasm; (4) Benign Growth of Tibia; and (5) Degenerating Chondroma in the popliteal region of a boy.—Mr. Leslie Paton: (1) Cases of Rodent Ulcer treated by carbon dioxide snow; and (2) Case of Scleral Trephining for Glaucoma.—Mr. W. H. Clayton-Greene: (1) Angioma of the Perineum; and (2) Tumour of the Jaw.—Dr. W. J. Gow: Ovarian Tumour.—Dr. Graham Little: (1) Alopecia Universalis with lichen planus; (2) Molluscum Contagiosum; (3) Favus of the Glabrous Skin; (4) Acne Varioliformis; and (5) Double Labial Chancre, with a rare form of secondary rash—a small follicular syphilide.—Mr. Cecil Graham: A Case of Pharyngectomy for Malignant Neoplasm.—Mr. V. Z. Cope: Traumatic Sensory Aphasia produced by subdural effusion of blood over the angular gyrus and just anterior to it, cured by evacuation of the clot.—Dr. L. Colebrook: Three cases of Actinomycosis. The exhibitor said that he had demonstrated the presence of the fungus in 16 cases in the last few years, 12 of which occurred in the last two years.—Dr. William Hill gave an œsophagoscopic demonstration of a woman with Malignant Stricture of the Middle Third of the Gullet, who had had six applications of radium in the last four years. The treatment had been successful in postponing the fatal termination which seemed inevitable when it was started. Dr. Hill exhibited the apparatus which he used for applying the radium.—Dr. Parry Morgan gave a demonstration of cases and charts illustrating the effect of the pneumothorax treatment of phthisis. A special apparatus which he had devised was shown.—Dr. B. H. Spilsbury exhibited some interesting pathological specimens, including a Lithopædion, probably produced from an extra-Uterine gestation; a Myxosarcoma of the Lower End of the Tibia, originating from periosteum; and the Bladder and urethra of a man who died from acute gonorrhœal septicæmia, showing active suppurative inflammation.

DEVON AND EXETER MEDICO-CHIRURGICAL SOCIETY.—The annual meeting of this society was held at the Royal Devon and Exeter Hospital on Jan. 9th, Dr. C. J. Vlieland, the President, being in the chair.—After the reports of the council and the honorary treasurer had been read and adopted, the following officers were elected:—President: Dr. Ransom Pickard. Vice-President: Mr. Brennan Dyball. Joint honorary secretaries: Dr. R. Solly and Mr. G. L. Thornton. Honorary treasurer: Dr. Ransom Pickard.—Dr. J. W. Pereira read a paper on the Relation of Barometric Pressure to Epileptic Fits.—In the discussion which followed, the President alluded to the great variations in pressure associated with mountain sickness, and saw no reason why circulatory disturbances should not be caused by lesser variations in the atmospheric pressure.—Dr. R. Eager mentioned that from his experience in asylum work he had noted that the irritability, the prominent condition in epilepsy, was aggravated by changes in the weather. Two cases of status epilepticus had recently come under his notice, both associated with considerable atmospheric disturbance, and it was to be remembered that this complication of epilepsy was not of common occurrence.—Dr. Pickard considered that it would be useful to compare readings of blood pressure and of the barometer simultaneously. In migraine, an allied condition to epilepsy, there could be demonstrated an actual contraction of the retinal vessels.—Mr. R. A. Worthington thought that useful experimental work might be undertaken with a view to ascertaining whether change of pressure or merely weather conditions was the accelerating factor in the production of a fit.—Dr. Pereira replied.—Mr. Russell Coombe showed a Uterus removed for severe recurrent hæmorrhage, the cause of which was found to be the presence of two minute polypi situated at the fundus.—Mr. C. Cochrane showed a specimen of Ruptured Heart.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Jan. 21st, Mr. R. G. Hogarth, the President, being in the chair.—Sir W. Arbuthnot Lane delivered an address on Chronic Intestinal Stasis. Owing to the erect position, he said, the bowels tended to drop into the pelvis. In this way bands or ligaments were developed in the lines of forces; these bands were most marked at the flexures of the large intestine, and tended to produce kinks and so cause obstruction. There was a special band near the appendix which obstructed this organ and also caused stasis of the lower end of the ileum. This damming up of the ileum effluent produced back pressure changes causing duodenal and gastric ulceration, and finally cancer of the stomach. Delay of intestinal contents in the small intestine also led to infection of the small bowel by organisms which normally were not present there. This caused such diseases as chronic pancreatitis and gall-stones. Besides this, more toxins were absorbed into the blood stream, leading to degenerative changes in the liver and kidneys, and thus in every organ of the body. Among the changes due to intestinal stasis were loss of fat, degeneration of muscles, especially the heart muscle, abdominal respiration, pigmented skin, offensive perspiration, headaches, and irritability. Indirectly, owing to the lowered vitality, tubercle, rheumatoid arthritis, and cancer were more easily acquired. In children short circuiting was sufficient, and old tuberculous sinuses had healed up after this operation alone. The colon should only be removed if its removal appears to be easy. The details of the operation were described, and stress was laid on the value of saline injections into the rectum. The chief risks were due to the development of adhesions.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Jan. 16th, Dr. T. Wardrop Griffith, the President, being in the chair.—Dr. F. W. Eurich read a paper entitled "Remarks on Intracranial Suppuration," which was discussed by Mr. G. Constable Hayes, Mr. W. Maxwell Munby, Dr. A. L. Whitehead, Dr. J. G. Greenfield, Dr. T. Churton, and Dr. R. A. Veale.—Mr. L. R. Braithwaite showed a case of a man aged 46 in whom an Aneurysm of the second and third parts of the right subclavian artery had been successfully excised, with a perfect functional result.—Dr. C. W. Vining showed a case of Congenital Heart Disease. There was a rough systolic bruit with a purring thrill, both having their maximum intensity at the base, but present on each side of the neck. The absence of any cyanosis or evidence of increase of size of the right heart made pulmonary stenosis unlikely. It was thought the case was one of aortic stenosis.—Dr. J. Stewart showed specimens from four cases of Extra-uterine Gestation. In one case the diagnosis was made and the affected tube successfully removed before rupture.—Dr. Churton showed three cases of Empyema, in one case bilateral, treated by drainage without excision of rib.—Dr. J. le F. C. Burrow showed Pachon's Oscillometer for measurement of blood pressure.

UNITED SERVICES MEDICAL SOCIETY.—A meeting of this society was held at the Royal Naval Medical College, Greenwich, on Jan. 8th. Surgeon E. L. Atkinson, R.N., read a most interesting and instructive paper on Antarctic Experiences. He dealt particularly with frost-bite and snow-blindness, and commented on the almost complete immunity from ordinary illness of the members of the last Polar expedition. At the conclusion of the paper he showed a most interesting series of lantern slides depicting a variety of incidents of the expedition.

# Reviews and Notices of Books.

*Diseases of the Stomach, including Dietetic and Medicinal Treatment.*

By GEORGE ROE LOCKWOOD, M.D., Professor of Clinical Medicine in the Columbia University. Illustrated. London: H. K. Lewis. 1913. Pp. 624. Price 25*s*.

THE intention of the author in writing this work has been to describe the diseases of the stomach as he has happened to see them and to present these subjects from the standpoint of personal experience. For this purpose series of cases have been grouped and analysed and the results noted, whether or not these results have been in harmony with pre-existing ideas. The author, therefore, rightly claims that his book may be described as a complete presentation of diseases of the stomach, as the result of many years of practice and observation of this special field.

Commencing with the consideration of gastritis, acute and chronic, a good description is given of the symptomatology, and full directions are afforded in regard to treatment, especially dietetic. In the diagnosis of the chronic variety stress is laid on the chemical analysis of the stomach contents. Dr. Lockwood says: "The diagnosis of chronic catarrh of the stomach cannot be made without the use of the stomach-tube;" in fact, throughout the whole work great importance is attached to this method of diagnosis. He maintains that gastric analyses should be made in every case of dyspepsia, no matter whether the symptoms be apparently gastric or intestinal, unless, of course, contra-indication to the passage of the tube exists; in every case of chronic diarrhœa that is not due to evident disease of the colon or rectum; in all cases of intestinal toxæmia, of recurring headaches of toxic origin, and in patients who complain of the symptom-complex which is spoken of by the laity as biliousness; as well as in all cases of anæmia and general physical wretchedness without known cause and which are rebellious to treatment. It would thus appear that the stomach-tube is used by Dr. Lockwood more frequently than by most physicians in this country.

Gastric ulcer is discussed at some length, the pathology, symptoms, diagnosis, and treatment of the acute and chronic forms being fully described. In considering the treatment Dr. Lockwood adopts the principle, now acknowledged by many physicians, that the value of nutrient enemas is due more to the quantity of liquid introduced than to the caloric value of the ingredients, as but little nutrient material is absorbed. Albumin and sugar solutions may add to the putrefactive processes in the bowel. He further believes that unless enemas are called for to combat depressing symptoms they do more harm than good by exciting peristalsis, which ought to be avoided. He therefore recommends that for an abstinent period of from three to five days enemas of nutritive value should not be given, or rectal injections of any kind, unless thirst be excessive or depressant effects of the abstinence become evident. We cannot altogether agree with these ideas, for while we support the view that the so-called nutrient enemas are probably of but little worth, nevertheless abstinence is better borne if enemas of normal saline solution are administered at regular intervals.

A large number of illustrations are given showing the results of radiographic examination, but Dr. Lockwood remarks that the sections on radiographic diagnosis were difficult to prepare, owing to radical differences of opinion between some of the leading radiologists as to the limitations, or lack of limitations, of their special art.

The book is written in a clear manner, and the illustrations are excellent. That the opinions and conclusions have been derived from personal observation renders the work of particular interest.

*Handwörterbuch der Sozialen Hygiene.*

Herausgegeben von Dr. med. A. GROTJAHN, Berlin, und Professor Dr. med. J. KAUP, München. Leipzig: F. C. W. Vogel. Band I., A–K. Pp. 703. Illustrated. Band II., L–Z. Pp. 943. Illustrated. Price, paper, 90 marks; bound, 97.50 marks.

THESE volumes have been compiled with characteristic German thoroughness and contain an immense amount of information on all kinds of subjects, arranged for ease of reference in alphabetical order. Each article is written by a man who is, presumably, an expert on the particular subject with which his article deals, and the standing of many of the authors in the scientific world is sufficient guarantee of the general excellence of the text. At the end of each article is a list of references to the literature consulted, which adds much to the value of the contribution.

It would be futile, in the space at our disposal, to attempt to describe, or even to enumerate, the many articles and subjects discussed in this dictionary, but the scope of the work may be gathered from the following selection: Alcoholism, ankylostomiasis, poverty, diseases of the respiratory organs, errors of refraction, cholera, diphtheria, epidemiology, epilepsy, ergotism, factory hygiene, diseases of nose and throat, home industries, invalid and old age insurance in the German Empire, diseases of childhood, puerperal fever, sickness insurance in the German Empire, statistics relating to disease, criminology, problems in connexion with labour, diseases of the eye, lead and zinc workers, and so forth.

It is interesting to note, in view of the experience of national sickness insurance in this country, that there appears to be very considerable dissatisfaction with the German scheme. Dr. Alfred Fischer, of Karlsruhe, sums up the position somewhat as follows. The German workman is very much dissatisfied with the working of the insurance system in the German Empire. The feeling among the workmen is that they do not desire a system of State insurance at all, but that if they must have such a system they would prefer that it should be voluntary and under their own control. They say that if a compulsory system of State insurance is to continue to be enforced, its measures should be very greatly extended and more far-reaching than at present. They have made certain suggestions which would, however, very greatly increase the present cost of the scheme. It is possible that if the working people had the control of the insurance they might in some respects, do better for themselves, but from a comparison with English statistics it seems likely that they receive greater benefits from the State than they would from private insurance companies. Certain new regulations when put into force will bring in seven million persons not previously insured, a very definite advance from the hygienic point of view. The premiums paid by them will make possible the granting of certain new benefits —for example, extension of the time during

which the weekly contributions are paid, choice of hospital, and, upon the whole, better treatment. In the author's opinion the maternity benefit should be extended. The money paid to the insured at such times should be equal to the wages which they customarily earn, and he points out the considerable advantage if a woman could receive this benefit for several weeks before the onset of labour. He urges the inclusion of a free midwifery service.

This dictionary should prove of considerable value to the student of social hygiene, and perhaps more particularly to the medical officer of health, with an adequate knowledge of the German language.

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*A Manual of Medical Treatment or Clinical Therapeutics.*

By I. BURNEY YEO, M.D. Lond., F.R.C.P. Lond., Emeritus Professor of Medicine, King's College, London, &c. Fifth edition by RAYMOND CRAWFURD, M.A., M.D. Oxon., F.R.C.P. Lond., Physician and Lecturer on Clinical Medicine, King's College Hospital, &c.; and E. FARQUHAR BUZZARD, M.A., M.D. Oxon., F.R.C.P. Lond., Physician to Out-patients, St. Thomas's Hospital, &c. London, New York, Toronto, and Melbourne: Cassell and Co. 1913. In two volumes. Pp. 834 and 846. Price 25*s.* net.

WE welcome the appearance of the fifth edition of this well-known manual and are especially glad to note that it comes at a shorter interval after its predecessor than elapsed between the third and fourth editions. On the other hand, a source of regret to all readers will be found in the announcement in the preface that on this occasion Dr. Burney Yeo has not himself taken part in the work of re-editing his book, leaving it entirely to the capable hands of his adjutants, Dr. Crawfurd and Dr. Buzzard.

No change has been made in the appearance or arrangement of the book, but the subject matter has been revised in accordance with recent advances in knowledge. As an example we may take the discussion of the treatment of phthisis by artificial pneumothorax, which the authors rightly refer to as a "somewhat heroic measure." The indications given are "progressive increase of the local disease in one lung in spite of all other measures of treatment and the limitation of excessive auto-inoculation"—blessed word! The results are stated to be good and to justify its employment "in a small proportion of cases," but it must be carried out by a surgeon of special competence. The use of pituitary extract is commended for acute anæmia and collapse following hæmorrhage. The administration of vaccines in pneumonia is not favoured, and it is pointed out that the striking effects produced by such means on the opsonic index and the temperature chart are not accompanied by improvement in the clinical condition of the patient. Of tuberculins, the authors write that observation and experience have proved that they are of curative as well as of diagnostic efficacy. We find that the "old tuberculin" used for diagnostic purposes is here called T.O., an unusual use of these letters, and also that the therapeutic employment of these preparations is discussed apparently under the heading of this Old Tuberculin, the one which is probably least used in this country. We are inclined to think this section of the book one of its weakest points. In tabes dorsalis antisyphilitic treatment is recommended, mercurial inunction being advised along with injections of salvarsan.

If we are to indicate any fault, we would venture to complain of a certain degree of indefiniteness in the advice given; no distinct personal guidance is afforded by the authors among a multitude of methods recorded. This is, perhaps, unavoidable. In the main the counsel given is throughout sane and moderate, and the book may be consulted with advantage in all medical affections and its conclusions acted upon with safety.

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*Das Problem des Verbrühungstodes. Studie zur Pathologie und Pathogenese der thermischen Allgemeinschädigung.*

Von Dr. HERMANN PFEIFFER, A.O. Professor für Allgemeine und Experimentelle Pathologie an der K.K. Universität Graz. Mit 39 Kurven und 4 Abbildungen. Wien: Ed. Hölzel. 1913. Pp. 272. Price 8 marks, 9.60 kronen.

HAVING regard to the frequency and large number of fatal accidents due to more or less extensive burns of the surface of the body, and to the diverse views which have been held as to the symptoms and the causes of death in fatal cases, we welcome this monograph, the result of something near a decade of study and experimentation on the whole question.

The author begins by citing the observations of MacFarlane in 1833, and the investigations of Curling in 1842 on the connexion between cutaneous burns and intestinal ulcers, as well as the observations of Wilks in 1860 on the pathological changes in the kidneys. The various hypotheses invented to account for death are passed in review and criticised, such as shock, the retention theory, hæmolysis of the red corpuscles due to the heat, and the reflex action theory. It was Billroth who first pointed out the practical identity of the symptoms in fatal cases with those of uræmia. Salvioli and Lustgarten suggested that the symptoms were due to the formation of toxic products. Reiss, in 1893, showed that the toxicity of the urine of the person severely injured by burning was increased. This is the toxic theory. In 1903 E. Stockis by means of experiments on dogs studied the changes in the blood pressure, in the blood itself, the respiratory and metabolic changes. As the effects of the direct introduction in the blood stream of the digestive products of proteins came to be investigated, and the facts of anaphylaxis were discovered, it became clearer that these decomposition products, absorbed from the burned and mortifying area, might act as toxins and produce the widespread pathological changes and the fatal result. Indeed, some observers thought that methylguanidin was the fatal poison.

Under the title "Thermal Injuries" the author includes both general and local injuries and the symptoms resulting from an energetic application of heat for a short time to the living body, but more especially to the surface of the body leading to death. First a description—careful, graphic, and detailed—is given of the symptomatology, beginning with the local changes in man and animals—e.g., erythema, blisters, necrosis, carbonisation, and dermatitis calorifica—and their relation to the general symptoms. The severity of the general symptoms depends on the extent, depth, and size of the burned part, and also on the channel of communication between the injured part and the rest of the body. Amongst the general symptoms are the direct injury to the physical and chemical condition of the blood and to the red blood corpuscles—heat hæmolysis leading to hæmoglobinæmia, hæmoglobinuria, and methæmoglobinuria. The author

has studied especially the changes in the leucocytes in guinea-pigs, and he finds in rapidly fatal cases a primary and intense leucopenia. Studies on antiproteolytic serum are given. Several chapters are devoted to the changes in blood pressure, respiration, and the pulse, to temperature changes, nervous phenomena, metabolism, and the toxicity of the blood serum. Most interesting are the parabiotic studies on rats and guinea-pigs by Heyde and Vogt. Not only does the severely injured animal die, but the healthy uninjured animal grafted to the injured one dies with the same general symptoms. If, however, the uninjured animal is severed early from the injured one it recovers. A careful voluminous account is then given of the post-mortem changes. A full study of all the phenomena leads the author to explain them as due to "toxicosis" from the poisonous products formed from the disintegration of proteins, or what he calls the "overproductive uræmia."

This must be regarded as an authoritative work on the problem with which it deals; it is a comprehensive and lucid monograph on an interesting and difficult subject, and the teaching conveyed is eminently practical.

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*Handbuch der Anatomie des Menschen.*

Herausgegeben von Prof. Dr. KARL VON BARDELEBEN in Jena. Vierter Band. Zweite Abteilung, erster Teil. *Anatomie des Nervensystems.* Bearbeitet von Prof. Dr. TH. ZIEHEN in Wiesbaden und Prof. Dr. ZANDER in Königsberg i. Pr. *Mikroskopische Anatomie des Gehirns. I.* Von Prof. Dr. TH. ZIEHEN in Wiesbaden. Mit 59 teilweise farbigen Abbildungen im Text. Jena: Gustav Fischer. 1913. Pp. 338. Price 14 marks.

THIS volume of Professor Bardeleben's Handbuch deals with the anatomy, both gross and microscopic, of the hind brain. Professor Ziehen, the author, is to be congratulated upon the exhaustive manner in which he has treated his subject.

A vast field of literature has been explored in the compilation. The illustrations, many of which are reproductions of actual sections through the brain stem, are remarkably good, and it is rather to be regretted that there are not more of them in a volume of this size. The fibre tracts and nuclei of the hind brain are described in exhaustive detail, and all that careful first-hand work and the study of the literature can do towards making the volume complete has been accomplished with great success.

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*Zeugung beim Menschen.*

By Dr. med. HERMANN ROHLEDER. Vol. III., The Functional Disturbances of Generation in the Male. Leipzig: Georg Thieme. 1913 Pp. 235. Price 5.80 marks; bound: 6.80 marks.

IN this the third volume of his monograph on Generation in Man the author discusses the various associated functional troubles occurring in the male, such as impotence and sterility.

The first section contains a consideration of the numerous etiological factors which predispose to these conditions, such as masturbation, coitus interruptus, sexual abuse, sexual abstinence, and lastly sexual neurasthenia. A very full account is then given of the subject of seminal emissions, both physiological and pathological, including the subject of spermatorrhœa. This is discussed under the various headings of etiology, pathology, prognosis, and treatment. The second half of the book is concerned with the causation, pathology, diagnosis, and treatment of the condition of impotence in the male.

The whole question is treated in considerable detail, and a great deal of useful information is afforded to those practitioners who are interested in the matter. The monograph when completed, as it will be in four volumes, will fill a decided lacuna in medical literature, and this volume, like the first two, will be a great help both to practitioners and specialists in the distressing task of dealing with these difficult cases.

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## LIBRARY TABLE.

*Medical Bacteriology and Protozoology (Catechism Series).* Second edition, enlarged and revised. Edinburgh: E. and S. Livingstone. Part I., pp. 80. Part II., pp. 84. Price 1*s.* net each part. *Medicine (Catechism Series).* Second edition. Same publishers. Part I. Pp. 95. Price 1*s.* net.—The "catechism" form in which these volumes are produced practically amounts to putting the headings of sections in the form of questions. The appearance of a second edition seems to indicate that this style has admirers. It possibly helps many persons in concentrating attention on the main point. The information given in "Medical Bacteriology and Protozoology" is concise and usually accurate, and a surprisingly large amount of it is compressed into small compass. The first 39 pages deal with general matters, such as culture of organisms, immunity, and so forth; the next 108 are devoted to accounts of individual bacteria, while the last 10 pages before the index contain an account of pathogenic protozoa, among which are included filariæ and intestinal worms (!), and an unassorted series, such as pellagra, beri-beri, sprue, and kala-azar. We do not know why syphilis and the spirochæta pallida are not included in a book which admits such heterogeneous matters, whereas yaws is mentioned and attributed to treponema pertenuis; surely it should be pertenue. In "Medicine" also the explanations are clear and free from ambiguity, and the subject matter seems accurate and up to date. The anonymous author has done his work of condensation and classification with considerable skill. With this class of book we always feel it necessary to point out that only if it is regarded and used solely as a "review" book for the purpose of correlating the facts obtained by proper study in the right manner can it prove of real service to the student. If the student relies on such works as a source rather than as a sorting of information, they will necessarily prove pernicious.

*Transactions of the American Otological Society.* Forty-sixth annual meeting held at Washington, D.C., on May 6th and 7th, 1913. Vol. XIII., Part I. Published by the Society. 1913. — There are several papers of interest in this volume, the first of which is on a specimen shown by Dr. B. A. Randall, of Philadelphia, of a portion of the skull of a patient who had been operated on some 40 years previously for lateral sinus thrombosis. Another paper is one that collects all the cases of abscess of the frontal lobe reported by Dr. Passmore Berins. The most interesting paper to British otologists is a report by Dr. Edward Plummer and Dr. Harris Mosher, of Boston, of the results of seven cases operated upon by Mr. Charles Heath, of London, in August, 1912. This paper is divided into two parts, the first of which gives a detailed account of each case from beginning to end, the second

showing abstracts of the cases. The abstracts are grouped according to classes, and are not given in chronological order. The first case took two months to heal; the second apparently about the same time; the third case three months, and so on. The reports of these cases are given without comment, though in the last part of the paper there is a careful summary. Finally, out of four acute cases operated upon three showed no loss of hearing, but one case required a radical mastoid operation later on with accompanying severe loss of hearing. Speaking generally, the result of these cases does not appear to have been to impress the writers of the paper with the value of the operation.

## JOURNALS AND MAGAZINES.

*The Journal of Physiology*. Edited by J. N. LANGLEY, Sc.D. F.R.S. Vol. XLVII., No. 3, November, 1913. Cambridge University Press. Pp. 149–274. Price 7*s.* 6*d.*—On the Real Nature of the So-called Artificial Globulins, by H. W. Bywaters and D. G. Clutsam Tasker. During recent years a number of statements have been made that albumin can be converted into globulin. Other observers maintain that the proteins of the body have a specific structure, and that no direct change of the one into the other takes place. The authors have prepared and analysed serum albumin and serum globulin (horse) and artificial globulin, egg-white and alkali metaprotein. They have examined artificial globulin, serum albumin, and serum globulin as to their sulphur, phosphorus, and carbohydrate content, and found that the artificial product is not identical with natural globulins. The experiments with egg-white and blood serum show that the artificial globulin is alkali metaprotein. A transformation of albumin into globulin does not take place.—The Protracted Contraction of Muscles caused by Nicotine and other Substances chiefly in relation to the Rectus Abdominis Muscle of the Frog, by J. N. Langley. Nicotine applied directly to a muscle causes a protracted tonic contraction. The author shows that a low concentration of nicotine (0·0001 per cent.) causes in nearly all the muscles of the frog a tonic contraction in the region of the fibres underlying the nerve ending—the neural region—while a higher concentration of nicotine is required to cause visible contraction in the parts of the fibres remote from the region. Even 0·1 per cent. does not cause any obvious contraction in the non-neural region. In this region 1 per cent. causes a local contraction. By studying microscopically the visceral surface of the rectus abdominis muscle it was found that it behaved like the other muscles of the frog or toad. Caffeine, digitaline, KCl, lactic acid, and sodium oxalates—types of substances known to have a direct action on muscle—all had a greater action on the neural than on the non-neural region. Next the contraction curve and the effects of washing off the nicotine with Ringer's fluid were studied. The rate of contraction increases with the increasing concentration of nicotine from 0·00001 to 1 per cent. The maximum height of contraction is only slowly attained with low concentration of nicotine, if the load is light. With a heavy load (15 to 25 grammes) the maximum shortening with all concentrations is attained in 10 to 30 seconds. The shortened state of the muscle after nicotine has acted the author calls "contracture," which appears to be due to an altered physical state consequent on an antecedent deep-seated and probably chemical change.—The Production of Reflex Stepping by Combination of Reflex Excitation with Reflex Inhibition, by C. S. Sherrington. This highly complex and interesting contribution—dealing with the results of deafferentations in the cat, observations on the rhythm of stepping, and the nervous mechanism involved in the act—is not of a nature that can be summarised in the space at our disposal, and we must content ourselves by referring to the elaborate and careful experiments recorded, and to the critical analysis of the results, and to the author's suggested explanations of the nervous mechanism of reflex stepping.—The Cerebro-Spinal Fluid: I., Secretion of the Fluid, by W. E. Dixon and W. D. Halliburton. The experiments were performed chiefly on anæsthetised dogs and on a few goats. In most of the experiments a cannula was introduced into the subcerebellar cisterna and the outflow of fluid measured electrically. The blood pressure was measured in the right femoral artery and the drug to be investigated was injected into the right femoral vein. The cerebro-spinal fluid at first comes out with a gush, 2 or 3 c.c. in the first minute, but the rate of flow rapidly diminishes. The intravenous injection of an extract of choroid plexuses (choroid gland) produces an increased excretion of the fluid through the cannula. This result may be due to some chemical substance in the extracts or to the mechanical effect of altered vascular or respiratory conditions. The authors give reasons to show that it is not due to either of the latter two. The increased flow also obtains after the previous injection of atropine. It is suggested that a chemical substance or hormone exists, the presence of which stimulates the secreting epithelium of the choroid gland to become active. The authors' experiments do not favour the view that the choroid hormone acts on the nerves which are known to exist in the choroid plexuses. The suggested hormone may originate in the metabolic activity of the central nervous system. In any case, extracts of brain produce the same effects on respiration, blood pressure, and above all on the flow of the cerebro-spinal fluid, as are produced by choroid extract. It may be that some metabolite of brain activity passes into the choroid plexus and stimulates the secreting epithelium, which causes the plexus to become active. In cases of general paralysis and brain softening, where catabolic processes are excessive, the cerebro-spinal fluid itself contains what is presumably the same material, for it produces the same effects. It is suggested that the chemical nature of this substance is probably the same in all three cases—i.e., in brain extract, choroid extract, and pathological cerebro-spinal fluid—for its solubilities, resistance to heat, and physiological activity are identical. The authors also studied the effects of injecting cholesterin and other brain constituents, pilocarpine, atropine, adrenaline, as well as the effects of respiration, anæsthetics, and hypnotics. They do not commit themselves to any definite view concerning the chemical nature of the active material or suggested hormone. There are three groups of cerebral lymphagogues suggested—(1) those that are specific, e.g., choroid extract; (2) an excess of $CO_2$ in the blood, or drugs which interfere with respiration, e.g., $CO_2$, amyl nitrite, and methæmoglobin; and (3) indifferent anæsthetics and narcotics which may act by interfering with oxygenation or by altering the physical conditions of secretion.—The Heat Production of Fatigue and its Relation to the Production of Lactic Acid in Amphibian Muscle, by R. A. Peters, is a paper of interest to physiologists, but it is too technical to allow of a short and illuminating summary.—A purely technical contribution is the note on a Simple Method of Calibrating the Differential Blood Gas Apparatus, by P. Hoffmann.

*Æsculape* continues its interesting career for those members of the medical profession of an antiquarian turn of mind. The increasing interest taken during the past two or three decades by many members of the medical profession in history and antiquities, especially as related to medicine, has enabled them to throw much light from the medical side on objects of antiquarian interest hitherto only half understood by lay antiquaries. In the January number Alfred Brunot discusses the recent revival of the art of wood engraving, and shows how the anatomical knowledge and the medical habit of observation of Dr. Paul Emile Colin have brought him into the front rank of wood engravers. Dr. Bailby exposes the confusion of thought in the use of the term Caduceus as descriptive of the emblem of the French military medical service. The rod of Mercury was often, but not always, entwined with two serpents. The badge of Æsculapius is a staff entwined with one serpent. Hence the erroneous application of the term Caduceus (the wand of Mercury) to the staff and serpent of Epidaurus which symbolises Æsculapius. Dr. Jules Regnault discusses opium-smokers, and Dr. Bonnette describes the medical horrors and heroisms of the campaign of the Grande Armée of 1812–13. Dr. G. Tafani, of Genoa, comments on the former relations of astrology to medicine, and reproduces a curious engraving from the "Fascicolo de Medicina" of Petrus de Montagnana, printed at Venice in 1493, showing the dominion of the various signs of the zodiac over different portions of the body. Finally, Septime Gorcieux describes the remarkable cultus of St. Leonard the healer, not only in old time, but as at present existent in Bavaria, Würtemberg, and the Tyrol.

## THE CLINICAL CONGRESS OF SURGEONS OF NORTH AMERICA.

### THE FORTHCOMING MEETING IN LONDON.

THE fifth annual session of the Clinical Congress of Surgeons of North America is to be held in London during the week commencing July 27th next, an invitation tendered by a committee of London surgeons through Sir Rickman J. Godlee having been presented and accepted at the session of the Congress held in Chicago in November, 1913.

The first session of the Congress was held at Chicago in 1910, with an attendance of 1000 surgeons; the second in Philadelphia in 1911 with an attendance of 1500; the third in New York in 1912 with 2700; while at the fourth session held in Chicago last November 4000 surgeons registered.[1]

As denoted by its name the sessions of the Congress are essentially clinical in contradistinction to the established idea of medical meetings at which men meet for the reading and discussion of papers. Of necessity the Congress is held in a large city where there are ample hospital and clinical facilities with a large number of clinical surgeons.

Tentative programmes will be published setting forth the names of the operators and the hospitals in which clinical demonstrations are to be given, together with the days and hours for the demonstrations.

Headquarters for the Congress will be established at the Cecil and Savoy Hotels. At the former the ground-floor banqueting suite will be utilised as the main headquarters of the Congress, and here will be bulletined daily the clinics in general surgery, gynæcology and obstetrics, genito-urinary surgery, orthopædics, X ray and laboratory demonstrations; while at the headquarters in the Savoy Hotel will be announced daily the clinics in surgery of the eye, ear, nose, throat, and mouth.

During the afternoon of each day there will be posted on large bulletin boards at these headquarters a detailed programme of the clinics and demonstrations which are to be given on the succeeding day. There will be issued each morning a printed programme containing complete information regarding the clinics and evening sessions.

There are to be scientific literary events on four evenings of the week. On Monday evening, in the Grand Hall of the Hotel Cecil, the presidential address will be delivered by Dr. John B. Murphy, together with one oration by some distinguished foreign or provincial surgeon. On Tuesday evening, in the same room, two or more addresses will be given by foreign or provincial surgeons on surgical subjects, and in the ball-room of the Savoy on the same evening there will be papers dealing with the surgical aspects of ophthalmology, otology, rhinology, laryngology, and oral surgery. Discussions of the papers will be made by London surgeons. On Wednesday and Friday evenings there will be similar sessions.

A system of reserved tickets will be utilised whereby members of the Congress may receive tickets for all of the clinics and demonstrations, such system being necessary to prevent overcrowding at the hospitals. Provision will be made by which these tickets may be arranged for in advance, based on the tentative programme. These special tickets are to be distributed at headquarters.

Temporary offices for the Congress have been established in the building of the Royal Society of Medicine, No. 1, Wimpole-street, W., and inquiries with regard to the Congress may be addressed to the Secretary-General, Dr. Franklin H. Martin.

The London Committee of Arrangements has been formed with Sir Rickman J. Godlee as honorary chairman and Mr. H. J. Paterson and Mr. H. S. Pendlebury as honorary secretaries.

The representatives of the several hospitals on this committee are as follows:—Mr. McAdam Eccles, St. Bartholomew's; Mr. Cuthbert Wallace, St. Thomas's; Mr. Walter Spencer, Westminster; Mr. C. H. Fagge, Guy's; Mr. H. S. Pendlebury, St. George's; Mr. J. Sherren, London; Mr. T. H. Kellock, Middlesex; Mr. R. Johnson, University; Mr. W. H. Clayton-Greene, St. Mary's; Mr. F. F. Burghard, King's College; Mr. H. S. Clogg, Charing Cross; Mr. James Berry, Royal Free; Mr. Maynard Heath, Metropolitan; Mr. C. Ryall, Cancer; Mr. G. E. Waugh, Hospital for Sick Children; Mr. Tyrrell Gray, West London; Mr. Percy Sargent, National Hospital for the Paralysed and Epileptic; Mr. J. W. Thomson Walker, St. Peter's; Mr. H. W. Carson, Prince of Wales's; Mr. J. Jackson Clarke, Hampstead; Mr. P. Lockhart Mummery, St. Mark's; and Miss L. B. Aldrich-Blake, New Hospital for Women.

[1] THE LANCET, Jan. 10th (p. 130) and 17th (p. 186), 1914.

## ROYAL COLLEGE OF PHYSICIANS OF LONDON.

### MEETING OF COMITIA.

A COMITIA was held on Jan. 29th, Sir THOMAS BARLOW, Bart., K.C.V.O., the President, being in the chair.

The following gentlemen having passed the required examination were admitted Members of the College: John Matthew Fortescue-Brickdale, M.D. Oxon. (Bristol), Arthur Charles Ingram, M.D. Cantab., L.R.C.P., Stanley Gordon Luker, M.D. Cantab., Georg Herman Monrad-Krohn, M.B. Christiania, L.R.C.P., John Henry Newmarch, L.R.C.P., Daniel Wells Patterson, M.B. Durh. (Newcastle-on-Tyne), John William Trevan, M.B. Lond., L.R.C.P., George Edgar Septimus Ward, M.D. Lond., and Rodolph Charles Wingfield, M.B. Oxon.

Licences to practise physic were granted to 97 gentlemen who had passed the necessary examinations.

Diplomas in Public Health were granted jointly with the Royal College of Surgeons of England to the following:—Charles Nelson Atlee, Whiteford John Edward Bell (Captain R.A.M.C.), Rose Lilian Humphrey Davy (under Medical Act, 1876), Cuthbert Lindsay Dunn (Captain I.M.S.), Irene Davy Eaton (under Medical Act, 1876), Maud Tresillian Féré (under Medical Act, 1876), Arthur Brownfield Fry (Major I.M.S.), Colin James Galbraith, Maharaj Krishna Kapur, Nariman Bejanji Kolsavala, Nelson Low (Captain R.A.M.C.), Donald McIntyre, Marjorie Eva Middleton (under Medical Act, 1876), Alan Hilary Moore, Clayton Conyers Morrell, Walter Woodall Pratt, Keshava Narayana Rau, Reginald Oliver Sibley, Charles Lindsay Sutherland, James Massimo Todesco, Frederic Ernest Wilson (Captain I.M.S.), John Hutchinson Wood, and Jamsetji Hormusji Writer.

The PRESIDENT announced that he had appointed Sir R. Douglas Powell, Bart., K.C.V.O., to deliver the Harveian Oration for this year, and Dr. Nestor Tirard to deliver the Bradshaw Lecture, and that the Council had appointed Dr. Edgar Leigh Collis to deliver the Milroy Lectures in 1915; also that the Swiney Prize has been awarded to Mr. J. W. Salmond for his work on Jurisprudence.

The following communications were received: From the secretary of the Royal College of Surgeons of England, dated Jan. 9th, 1914, reporting proceedings of the Council of that College upon Jan. 8th. From Sir Theodore Hope, K.C.S.I., dated Jan. 4th, 1914, asking whether the College would accept the reversion of a portrait of his father, Dr. James Hope. The gift was accepted with the thanks of the College.

On the nomination of the Council the following Fellows were elected Councillors: Dr. D. Bridge Lees (for one year, in the room of Dr. W. Collier, resigned), Dr. R. G. Hebb, Dr. W. D. Halliburton, Dr. W. S. A. Griffith, and Dr. G. R. Murray. Sir Francis Champneys, Bart., was reappointed a Representative of the College on the Central Midwives Board, and Sir Dyce Duckworth was reappointed a Representative of the College on the Council of Queen Victoria's Jubilee Institute for Nurses.

After some further business the PRESIDENT dissolved the Comitia.

## New Inventions.

### THE WYCHE PORTABLE LAMP.

THIS lamp was designed by Dr. Wyche, and is available for ophthalmoscopy and ear, nose, and throat work. It can be quickly converted for use either with gas, acetylene, or electric light, as may be required, and will prove very valuable to many practitioners. It is packed in a convenient manner and can be easily set in working order. The ophthalmic surgeon will still probably prefer to use an electric light ophthalmoscope, where current is available, and in the consulting-room, but physicians and others who require a portable instrument, which can be set up, if required, at a patient's residence, will welcome this lamp. The makers are Messrs. Bruce Green and Co., Limited, 14–18, Bloomsbury-street, W.C.

# THE LANCET.

*LONDON: SATURDAY, FEBRUARY 7, 1914.*


## The Proposed Amendment of the Law Relating to Lunacy.

THE paper read by Dr. R. ARMSTRONG-JONES before the Medico-Legal Society,[1] the discussion which followed, and the widespread interest evinced in the subject, show that in the minds of many well qualified to judge there exists a strong feeling that the law relating to lunacy in this country falls short of the highest standards and should be amended. In view of the recent progress of medical science this is in no way surprising, and it is equally natural that the aim of any proposed reform should be the treatment of insanity as a disease capable of prevention, and as one which yields, more especially in its earliest stages, to curative treatment. The present law regards insanity as a more or less fixed condition demanding before all things the protection of the patient's person and property. Patients suffering from mental disease are protected rightly and justly, but the existing law enacts that as a condition of that protection they should be massed together without distinction or classification under a system which inevitably allows a stigma to fall indiscriminately upon all to whom that system has once been applied. The Medico-Legal Society passed unanimously a resolution expressing the opinion of the meeting that "early treatment of incipient insanity without certification will be advantageous, and that the council be authorised to take such steps as they may think necessary to support legislation to effect this object." The motive which determined the bringing forward of this resolution, apart from its general merits as a subject for consideration by medical men and by lawyers, was no doubt to prevent if possible the Maudsley Hospital from becoming, when completed, a lunatic asylum indistinguishable in its legal status, its responsibility to authority, and perhaps even in policy, from other asylums under the same control. It is to the general purport, however, of the resolution and not merely to its effect upon an institution nobly devised and planned by an individual benefactor of his fellows that we would call attention.

We need not detail the points made by Dr. ARMSTRONG-JONES, his paper having been published in full in our columns so recently. He maintains (1) that the present law in providing for the care of the insane necessitates the treatment as certified lunatics of persons who might be cured of their mental disease without certification, and all that it implies; and (2) that the treatment of all alike as certified lunatics, with the consequences of certification, imposes hardships from which patients should be protected wherever possible. These hardships deter many from seeking early treatment, and render treatment when sought less readily effective through the anxiety and distress involved; and motives of humanity should lead to their abolition. The proposals of Dr. ARMSTRONG-JONES and those who agree with him, or, in other words, the objects of the resolution quoted, can only be carried out in full by the training of medical men as experts in mental disease to an extent far greater than that which now obtains, and by enabling patients to submit themselves, or to be submitted, to treatment by medical experts of high efficiency without the certification now required in all cases, and without any formality or circumstance such as would attach the stigma of lunacy to the patient. The object of the system would be the treatment of mental disease by experts in its earliest stages, every inducement being held out to attract the patient to the expert on the first suspicion of his illness arising. This it will be seen might be brought about with regard to patients of all classes, rich and poor, and either in private or public institutions, but could not in the case of the poor be done effectively by merely allowing licensed asylums to take in voluntary and uncertified boarders for treatment, either at their private expense or through public agencies—a suggestion made by Dr. HUBERT BOND in the course of the discussion at the Medico-Legal Society's meeting. A member of the working classes or of any other class emerging from temporary residence in the county asylum or any other "lunatic asylum" would be regarded by his neighbours as an ex-lunatic; the omission of certification in his case, owing to the passing of a new law, would escape attention. The proposals of those advocating reform include the treatment of mental cases of a transient nature, or in their earlier stages, either in special wards or out-patient departments of general hospitals or workhouse infirmaries, or as patients under single care. The example of Scotland may be quoted, where a difference of the period during which certification may be dispensed with is found to operate advantageously, and those working for the amendment of the law point also to those British dependencies and foreign countries in which the early treatment of mental disease is actively practised by the medical profession, aided by different and varying legal conditions. Reference in particular is made to the psychiatric clinic at the University of Munich, the methods and achievements of which it is claimed should be studied by all who might otherwise be inclined to resist change on the ground of the insufficiency of the results likely to be brought about. There must also be taken into account in this country the weight of medical opinion which has been expressed in favour of reform by men eminently qualified to speak with

[1] THE LANCET, Jan. 17th, p. 196.

authority of the highest and most varied kind. The position taken up by Dr. HENRY RAYNER in his letter to our columns this week is an exact reflection of that now adopted by many leaders of professional thought.

That there are two sides, or, indeed, more than two, to any such question cannot for a moment be denied. Dr. HUBERT BOND, when addressing the Medico-Legal Society in the discussion which followed Dr. ARMSTRONG-JONES'S paper, assented to the general principle that treatment of incipient insanity at the earliest moment possible should be encouraged, but declined to accept the proposition that modification of the law was desirable or that an immediate alteration upon the lines proposed was an essential condition of reform. He and his brother Commissioners in Lunacy, who have without fear or favour carried out the public duties imposed upon them to the benefit of the afflicted persons under their care, are very alive to the risks involved in a change which must curtail their exercise of that care so far as a large number of persons are concerned upon whom it is now bestowed. We do not understand that there is any proposal that the Commissioners should have no jurisdiction whatever over persons under treatment but not certified, or that there should be no superintendence of measures taken for their benefit, but only that in practice the absence of certification and the change of system involved must necessarily diminish the amount of direct oversight and authority exercised. Due weight will no doubt be assigned to opinions held by the Commissioners in Lunacy, who include lawyers of distinction and experience as well as medical experts. Nor will it be surprising if a proportion of those intimately concerned with the care of the insane as medical officers of asylums should be opposed to any change which would remove from their care the patients who are most likely to yield satisfactory results in response to treatment, and to assist them in the development of curative measures for the benefit of others. It must be remembered, however, that the carrying out of a reformed system of early treatment will necessarily involve the improvement of the conditions of medical service for the insane, of the training for that service, and of the rewards reserved for it.

Whether reform is desirable, whether it is possible, and whether it can be obtained by the means proposed, are three large and separate questions. The arguments for and against the change must be considered by all—that is to say, by the public as well as by the medical profession, by those interested directly, and by those whom humanity and philanthropy animate. It must be asked whether the change will be for the good of those for whose benefit it is designed, and whether it will bring about that benefit without injury to those others who admittedly will derive no advantage from it. The proposal is to dispense, whenever it is possible and for a period, with the precautions necessary for the proper care of persons whose unsoundness of mind is neither incipient nor transient, in order to bring all threatened with insanity under treatment at the earliest possible stage of their disease, and in order, so far as it is possible, to relieve persons destined to recover from the indirect and unnecessary consequences of a temporary physical condition. The matter has been before the legislature already, but, like others of no less importance, has been shelved, and its early reconsideration is earnestly to be desired.

## The Lessons of the London Water-supply.

THE present satisfactory condition of the water-supply of London both as regards its quality and quantity has silenced many a bitter controversy on this vital question. When we bear in mind that the largest and most important city in the world derives the great bulk (80 per cent.) of its supply from two rivers, both of which drain populous areas and are undeniably sewage-polluted, and that the general health of the metropolis is a matter receiving genuine congratulation from all parts of the world, we all realise that the service responsible for the purity and quantity of this supply must be in a high state of efficiency. We do not forget, of course, that other departments of public health administration have shared in producing the fine bill of health shown for the metropolis, but while the sanitary reputation of London is remarkable as regards sickness and death from all causes, it is particularly so as regards those diseases which are liable to be water-borne. Splendid service has clearly been done, and we obtain some idea of the inner workings of this service in a recently published monograph by Dr. A. C. HOUSTON, the Director of Water Examinations to the Metropolitan Water Board.[1] Dr. HOUSTON'S official connexion with the Board has now lasted for eight years, and during this time most valuable researches have been carried out under his control which have given a veritable insight into the principles to be adopted for the purification of water.

Dr. HOUSTON recognises that the Metropolitan Water Board has shown itself fully alive to its serious responsibilities by instituting an elaborate system of water examination, by providing facilities for carrying out many important researches, and generally by looking at the whole subject of water-supply from an all-round point of view. The questions have evidently been approached by all who have had any say in the matter in a complete spirit of agreement as to the importance of the great issues involved, and as to the methods of investigation to be pursued; pure science, engineering, and practical knowledge have been brought to bear upon the work, and all concerned may well be proud of the result. Not many years

[1] Studies in Water-Supply. By A. C. Houston, D.Sc., M.B., C.M. London: Macmillan and Co.

ago misgivings were freely expressed by admitted authorities upon the subject as to whether London could ever hope to obtain a permanently pure and adequate supply of water from its near resources. It was urged that water was being drawn from sewage-polluted streams, the contamination of which would necessarily be more dangerous as the population increased; and that in such a case it would be running a grave risk to rely upon the efficiency of any known purifying processes in dealing with such raw material. So seriously impressed were the London County Council with this view that some of them insisted that the only safe course was to draw water from an outlying watershed. Wales was suggested as the best source of supply, and an elaborate scheme was drawn up based upon the inspection of certain watersheds in that country by the Council's engineers. The scheme had obvious attractions, but general economic considerations proved too weighty to justify its adoption. It is fortunate that simultaneously with the rejection of this scheme the natural processes of purification of water were having a fresh light thrown upon them by bacteriological science. "Until comparatively recently," writes Dr. HOUSTON, "the search for pathogenic microbes in water was regarded as almost labour lost, for the reason that the practical difficulties attending their isolation were so great that failure to isolate them afforded no satisfactory indication of their real absence." Of late years however, he goes on to show improvements in technique and methods have altered the whole complexion of affairs, and now it is possible, although still a difficult and laborious task, to isolate the typhoid bacillus when present in only small numbers from a water, even when that water is swarming with other bacteria. It has been shown that in spite of the pollution to which a river is exposed, the water may nevertheless be observed to contain none, or scarcely any, of the microbes of water-borne disease when tested by methods of proven value. The fate of these organisms passing through processes of purification may thus be traced, and lines of defence can be tested. Hitherto the sand filtration process has been regarded as the chief safeguard against the passage of pathogenic organisms into the drinking supply, but it is now agreed that, unless filtration is supplemented by storage in the case of a raw river water, this single defence may break down. According to Dr. HOUSTON'S experiments, even one week's storage would result in a larger percentage reduction in the united numbers of typhoid bacilli and cholera vibrios than we could ever hope to bring about by the use of sand filters alone under the usual practical conditions of working. The provision of adequate storage accommodation enormously reduces the risk of disaster. To quote the example which he gives:—if a typhoid carrier micturated in the river just above the intakes (say from a boat) the typhoid germs in the absence of storage would be carried directly on to the filters with consequences which could hardly be other than calamitous. On the other hand, a similar accident in the presence of adequate storage would probably, if not certainly, be unattended by serious results owing to the effect of storage.

It would thus appear that London owes its immunity from water-borne disease to the lessons of bacteriological research so carefully applied by the Director of Water Examinations to the Metropolitan Water Board. The lines of defence in the case of the raw river waters supplying the metropolis are clearly storage and sand filtration, but the greater purifying agency is storage. A knowledge of this fact, however, does not justify the withdrawal in any sense of those strict precautions to keep the raw stream, prior to its reaching the reservoir and filter-beds, as free from contaminating influences as is possible. The building of great reservoirs coupled with the adoption of efficient sand filtration methods has made and maintained the water-supply of London safe for use, whilst providing also an allowance sufficient to banish all fear of shortage. These results are surely a triumph for bacteriological research, and for those who were responsible for its practical application.

# Annotations.

"Ne quid nimis."

## THE NECESSITY FOR ADMINISTRATIVE CONTROL OF KINEMATOGRAPH SHOWS.

WHILE admitting the many advantages that may conceivably accompany the introduction of the kinematograph show—its capacity for being made an educational medium in natural history, biology, and other forms of science, the value of the instruction it can be made to render in regard to insanitary conditions in relation to disease, its use in broadening the mind as a substitute for travel, and so forth—we have been careful to point out the need of some supervision. As a drug may be either a valuable remedy or a dangerous poison according to circumstances, so the qualities of the kinematograph which make possible the foregoing benefits may equally subserve vicious results if improperly used. Moreover, the sanitary conditions of many of the shows leave much to be desired, and parental control over the way in which children spend their time is increasingly lacking in these latter decades. Our Manchester correspondent last week called attention to the findings of an inquiry into the question by the Lancashire Elementary Education Subcommittee, which deserves careful consideration. For, according to the *Manchester Guardian*, in Great Britain to-day 7,000,000 individuals attend "the pictures" every week, while the "shows" themselves employ over 120,000 people, at a weekly wage amounting to £245,000. Manchester, with a population of 731,000, has more picture palaces in proportion to its population than any other big city or town in the United Kingdom; the number is 94; Salford, with 231,350 inhabitants, has 28; Stockport, population 108,680, has 9. London

possesses 503 picture houses. Altogether there are some 6000 picture palaces in the United Kingdom. The growing extent of this industry, therefore, and the great part it is destined to play for good or ill in our national life surely call for the attention of the administrative authorities. They are, on the showing of the Lancashire subcommittee, almost as potent for evil as public-houses, and like them should be subject to some control.

## APPENDECTOMY IN A BLEEDER.

HÆMOPHILIA is so rare that when called to operate for acute conditions the surgeon seldom inquires as to its existence unless some concomitant symptoms prompt his questions. It may give rise, therefore, to unexpected complications, as the following case, reported in the *Boston Medical and Surgical Journal* of Jan. 15th, by Dr. T. W. Harmer, shows. A tall, spare man, aged 25 years, was operated on for acute appendicitis. When he was on the table some pinpoint hæmorrhages over the freshly shaved pubes only aroused a pleasantry about hospital razors. A 3½-inch incision was made over the right rectus muscle midway between the umbilicus and the pubes. The anterior sheath of the rectus being cut the muscle was bluntly divided longitudinally, and the deep epigastric artery was picked up on each side of the wound, cut, and doubly tied. The wound was a pool of blood. Several vessels were picked up, but as the oozing seemed general a sponge was laid against either side of the wound and held by retractors. The peritoneum was opened without incident. The appendix was felt behind the cæcum. Though the cæcum was gently raised a patch of hæmorrhage immediately developed in its wall, and tongues of blood spread peripherally beneath the serosa. A short, swollen, injected appendix was delivered after breaking a few fine fresh adhesions. The meso-appendix was clamped and cut in sections from tip to base. The right quadrant of the abdomen was then filled with blood. This was mopped up, the appendix tied and cut off, and the stump touched with carbolic acid and alcohol. The clamped portions of the meso-appendix were tied off. Still the mesentery line oozed smartly. Several extra ligatures and a couple of interrupted sutures checked but did not stop the oozing. The abdomen was closed tightly in layers, the peritoneum continuously, the fascia and skin interruptedly. A few through-and-through sutures down to the peritoneum were used. It was necessary to sponge continually while closing the wound; every stitch-hole was a new bleeding point. Anticipating a hæmatoma in the wound, several folded pieces of gauze were placed over it and held against it with tightly placed adhesive straps. A large pad and a firm binder completed the dressing. Although considerable blood was lost the pulse was always fair. To keep the blood pressure down the patient was given no fluids during the night and morphine to combat restlessness. Next morning the pulse was 68 and of good quality. Liquids without milk were then given. After an enema two stools were passed. At 2 P.M. vomiting of very dark brown liquid began, and stools containing altered blood were passed both after enemata and otherwise. On the following day the temperature rose to 102° F. and the pulse to 90. When the dressing was removed the wound was found elevated on a rounded prominence about 5 inches long and 2½ inches wide, of purplish-blue colour and firm consistence, evidently a massive hæmatoma. Extending from this to the edge of the pad was a paler ecchymotic field, and just beyond this the ecchymosis was more intense. Strips of ecchymosis extending well into the flanks marked the edges of the adhesive straps, but beneath the latter there was no discolouration. The vomiting continued, and for 24 hours nothing was given by the mouth. Eight ounces of saline solution were administered by the rectum every four hours and subcutaneous injections of morphine were given. The vomiting promptly ceased. For 18 hours longer the enemata, with the addition of sodium bicarbonate, were continued, and 3 ounces of water containing a drachm of this salt were given by the mouth to combat the acidosis which might occur after three and a half days' starvation. The bicarbonate and enemata were then discontinued and solid diet was begun. Henceforward convalescence was uneventful. The ecchymosis gradually spread down to the penis and over the abdomen and then began to fade. After the discovery of the hæmatoma the wound was covered with alcohol dressings. On the seventh day the stitches were removed and the hæmatoma, much reduced in size, was evacuated through a stab with a director. Serum oozed from the wound for several days. The following history was obtained after the operation. About three or four years previouly he had two or three teeth extracted and bleeding continued for three days which the dentist tried to arrest by various astringents and packings. Two years previously he fell on the ice, splitting open the tip of a finger for about a quarter of an inch. Despite bandaging the wound bled for two days and stopped only on suturing. Whenever he cut himself in shaving he bled. The family history was negative as to hæmophilia. Evidently the vomiting and diarrhœa were due to intestinal hæmorrhage and the pyrexia to absorption of extravasated blood.

## STANDARDS FOR FOODSTUFFS.

THE Bill to amend the Sale of Food and Drugs Acts which was introduced into Parliament by Mr. John Burns towards the close of last session has been subjected to a long course of adverse criticism, and when the measure is reintroduced in the House of Commons during the forthcoming session it will no doubt be the centre of much controversy. The object of publishing the proposals of the Local Government Board at the end of a session, when there was no possibility of advancing them, was, however, to invite criticism, and the fact that the invitation has been accepted need occasion no surprise. The vital clause of the Bill seeks to obtain power for the Board to set up standards for foodstuffs, and this proposal is strongly condemned by manufacturers of and dealers in foods. Meetings have been held in many districts at which strong disapproval of the measure has been expressed, and there can be no doubt that so long as the Bill embodies the principle contained in its main clause its passage will be a rough one. The grounds for the objections raised by the trades affected are clearly stated in a memorandum, drawn up by the Parliamentary and Emergency Committee of the Federation of Grocers' Associations, which is now being circulated among the grocers' organisations. It is pointed out that the Bill would vest in the Local Government Board the

power to set up standards not only for natural articles but also for all kinds of manufactured foodstuffs. It is claimed that any standards set up for natural articles would have the effect of lowering the average quality of goods, because the standard must bear relation to the lowest normal quality, and in this connexion it is argued that the setting up of standards for water in butter and fat in milk has depreciated the average quality of these articles. With regard to manufactured articles, the federation claims that, if standards were defined for these, manufacturers might be compelled to disclose their formulæ and other trade secrets which represent legitimate improvements in manufacturing methods. Grocers' associations are recommended by the federation to take active steps to impress upon Members of Parliament the desirability of withdrawing the present Bill and pressing for the appointment of a Select Committee to inquire into the whole question and to make recommendations as to the form which any amendment of the Sale of Food and Drugs Acts should take. The interests of the public must come first, and while the Local Government Board will no doubt give due consideration to the views of the traders we may be sure that the essentials of a reforming measure will not be sacrificed to expediency. There is, however, some reason to suppose that manufacturers and vendors are unnecessarily alarmed. The Local Government Board has stated that it is not the intention that the powers under the Bill should be utilised in such a way as to set up a general code of definitions, but that regulations would be restricted to special cases where it is clear that a standard is necessary. What the traders concerned seem to fear is that if the Board is granted the powers which the Bill proposes its intentions would become much broader until in course of time purveyors of food would be insufferably harassed. But it should not be impossible to find some form of wording which would enable the Board to protect the public without applying vexatious methods, and so save a measure which embodies a sound principle.

## FUNCTION OF THE PINEAL GLAND.

Now that the thyroid, the pituitary, and the suprarenal bodies are pretty firmly established as organs which produce an internal secretion, attention has been turned to the pineal body as another probable ductless gland. Occupying as it does a central position in the brain, it was looked upon by Descartes as the seat of the soul, but the morphologists regard it as a rudiment representing the remains of a median eye. It would thus seem at first sight unlikely to possess secretory functions. Evidence is, however, accumulating that such may be the case. We called attention at the beginning of last year to a suggestion[1] that the gland had two separate functions—one a power of restraint on the development of the genital apparatus, which was lost at puberty; and the other a general influence on metabolism which continued throughout life. Further observations and experiments have been made by Dr. Charles L. Dana[2] and his collaborators in the United States which tend to confirm the existence of an internal secretion derived from the pineal body. Administration of an extract of the gland to two normal children appeared to cause an increased elimination of nitrogen in the urine, while similar administration to a number of mentally defective children seemed in many cases to be followed by improvement in the general intellectual condition. It was useless, as might have been anticipated, in cases of total idiocy or gross physical defects. It is suggested that there is a form of mental deficiency which may be due to hypo-pinealism, but it seems impossible as yet to distinguish such cases except by the results of pineal treatment. It was curious that in the children thus treated the physical progress was less than that in controls who received no pineal extract, whereas the mental improvement was markedly greater. Experiments on animals showed that the extracts had no pressor effect on the circulation. Young animals, however, which received doses of the extract grew at a greater rate than the controls, and could easily be picked out at sight owing to their size and healthy appearance. Thus of eight young guinea-pigs four which were fed with pineal extract gained 36 per cent. in weight, while the controls gained only 25 per cent., and a very similar effect was seen in kittens and young rabbits. The contrast between the physical growth of these animals and the conditions seen in the children who developed mentally but not physically is striking. The subject is one of considerable interest and importance, and further work in this field is called for. Trial of pineal extract in institutions for mentally defective children presents no great difficulty, and observations might well be carried out in this country to confirm, if possible, the results obtained by the American writers and add a new agent to the limited number which seem to have any effect on mental abnormalities.

[1] THE LANCET, Jan. 11th, 1913, p. 117.
[2] Reprint from Medical Record (New York), 1913, vol. lxxxiii., p. 835.

## THE SEE-SAW PHENOMENON IN CERTAIN CASES OF UNILATERAL PTOSIS.

IN 1896 Pacetti, in his work on functional paralyses of the ocular muscles, described the so-called see-saw phenomenon (ptosis *a bilancia*) in three patients with ptosis of the upper eyelid; the first suffered from tabes, the second from paralytic dementia, while the third was affected with both these diseases. This phenomenon consists in the fact that in such cases if the sound eye be closed the lid of the affected eye is easily raised without active intervention of the patient or the action of any other muscle. In one of Pacetti's cases the eyeball, which was in a state of external strabismus, returned to the median line at the moment when the ptosis disappeared. As long as the hand remained over the sound eye the other eye continued open for an indefinite time; as soon as it was taken off the ptosis returned in its primitive intensity. In a recent number of *Il Policlinico*[1] Dr. Gustavo Artom relates an interesting case of basilar meningitis in which this phenomenon existed in a marked degree. The patient, a married woman with a positive Wassermann reaction, complained of pain in the left frontal region and had partial left external ophthalmoplegia. The author, in seeking an explanation of the phenomenon, recalls Pacetti's hypothesis that the fibres to the levator palpebrarum are partly crossed. Thus if the motor oculi is affected on one side only the levator palpebræ of the affected side would undergo a controlateral nerve stimulus sufficient to allow of the elevation of the ptotic eyelid. A proof of the truth of this theory is to be found

[1] Il Policlinico, Anno xx., Fasc. 51, Dec. 21st, 1913.

in the physiological coöperation of the two elevators of the upper lid. Dejerine made a careful histological investigation of the nuclei of the motor oculi in a patient affected with congenital unilateral ptosis, and established the fact that the nucleus of origin of the levator palpebræ was situated in the anterior part of the nucleus of the third pair of nerves and that there was a partial crossing. According to Pacetti the controlateral nerve stimulus, which is only felt when the sound eye is closed, would be automatically inhibited by the occurrence of diplopia which always exists in these cases owing to other muscles besides the elevator being involved. Mingazzini, however, believes that it is not so much the diplopia that prevents the development of the phenomenon as the fact that the pressure of the hand over the sound eyelid compels the patient to exert a stronger impulse on the sound nucleus of the elevator of the same side from which arise the crossed fibres which supply the elevator of the paralysed side. The reason why this see-saw phenomenon is not invariably met with is obvious; a lesion of the cells, or crossed fibres, connected with the nuclear group of the elevator of the sound side is sufficient to prevent the occurrence of the phenomenon. In other words, it is dependent on the entire or partial integrity of the cells from which the crossed fibres arise which supply the levator palpebræ of the opposite side. The marked value of this phenomenon as a diagnostic sign in lesions of the nucleus of the third pair of cranial nerves should attract the attention of nerve specialists towards it.

## ACUTE ASCENDING MYELITIS IN THE COURSE OF SECONDARY SYPHILIS.

NOT a few cases are now on record of acute myelitis supervening in the course of syphilis, especially during the second stage. Sometimes the lesions have been of the nature of a poliomyelitis, at other times of a transverse myelitis, and again of an ascending paralysis, and the question of the connexions between the venereal infection and the spinal cord changes has been much in dispute. M. Henri Barth and M. André Léri published a case of this type recently[1] which presented features of considerable importance from the point of view both of the clinician and the pathologist or bacteriologist. A young and unusually healthy girl, aged 17, a few days after a first sexual intercourse, developed a vaginal discharge, and rather more than a fortnight later a vulvar chancre made its appearance, to be followed in two months by a roseolar rash. The patient was treated with Van Swieten's solution (mercuric chloride) and pills of mercury iodide. Almost exactly six months after the original infection the symptoms of an acute ascending paralysis developed with startling suddenness. Headache, vomiting, and rise of temperature occurred, and in two days the patient was completely paraplegic; on the third day the arms were affected; on the fourth, bulbar symptoms and cardiac embarrassment set in; on the fifth day phonation was involved. Apart from paræsthesiæ there was no objective loss of sensibility. On the seventeenth day the illness ended fatally. The clinical picture was obviously that of an acute ascending myelitis of syphilitic origin, a diagnosis apparently confirmed by an extremely abundant and almost pure lymphocytosis of the cerebro-spinal fluid found on the second day of the paraplegia. Nevertheless, cultivation both of the blood and of the cerebro-spinal fluid on several separate occasions gave a pure culture of micrococcus tetragenus. (In the blood 80 per cent. of the white cells were polymorphonuclears.) It is interesting to note that a number of cases of meningo-medullary infection have been published in which the sole organism found was the micrococcus tetragenus, and some of these have been instances of acute ascending paralysis. The pathological changes in the cord in the case here described, however, were entirely those of acute syphilitic meningo-myelitis, with the chief incidence of the process on the anterior grey matter. M. Barth and M. Léri have made a careful scrutiny of the literature and have been somewhat surprised to note the frequency with which syphilitic infection has preceded the development of acute myelitis, a disease that cannot be said to be very common. In 37 cases of the disease not less than 23 occurred within three years of syphilitic infection, and 15 of these were of the ascending type. Singer has recorded 19 cases of acute myelitis; 15 of the patients were syphilitic and 12 developed the disease within three years of infection. MacNamara has published a valuable case of acute ascending myelitis where the micrococcus tetragenus was recovered in the cerebro-spinal fluid; the patient was syphilitic, made a good recovery from the myelitis, but subsequently developed typical tabes dorsalis. M. Barth and M. Léri are therefore inclined to suggest in their case a mixed infection by the micrococcus and the spirochæta pallida. It is probable that the former played the rôle of "sensibilisateur," and that in early and severe invasion of the spinal cord and nervous system generally by the spirochæta pallida even a simple saprophyte like the micrococcus may pave the way by sensitising the tissues of the individual. In discussing, therefore, the syphilitic or non-syphilitic origin of acute myelitis supervening in the course of secondary syphilis it is well to take account of such cases as that so excellently described by M. Barth and M. Léri.

[1] Revue Neurologique, Oct. 15th.

## ACID INTOXICATION IN INFANCY.

IN a very interesting communication to the *American Journal of the Medical Sciences* for January Professor Isaac A. Abt, of Chicago, describes a type of acidosis observed by him in infants which he believes to be separate and distinct from the similar intoxications which are already recognised. The victims of this disorder, nine of whom have come under Professor Abt's care, are nearly always infants at the weaning stage, previously healthy and of healthy parentage. Three of his cases, two of them fatal, were of one generation in the same family, and he knows of a similar familial group in the practice of a colleague. In some cases the child shows a stationary weight curve for a little time before the onset; some of the children were at the breast, others were on the bottle. The onset is gastro-intestinal in type, diarrhœa with some vomiting being the predominant symptom. Fever rarely exceeding 101°F. and soon falling, restlessness, and early dyspnœa of the air-hunger type, are also noted. The liver is uniformly enlarged and firm, the urine soon contains albumin with casts (and leucin and tyrosin in one instance) and acetone and diacetic acid, but no sugar. The abdomen becomes more and more

distended, intestinal atony being extreme towards the end, which occurs in coma on the fourth or fifth day. The blood count is not altered, and there are no nervous symptoms apart from the stupor, which begins early and deepens into coma. Professor Abt is careful to differentiate between these cases and the other common acidosis of childhood, cyclical vomiting, on clinical grounds, but the necropsy findings in four fatal cases are much like those of the more familiar syndrome. There is extreme fatty degeneration of the liver, but no jaundice. Similar changes are noted in the renal parenchyma, and moderate focal necrosis is noted in the myocardium and lungs. The familial factor is a point of great interest, since it enters into other acidoses, such as that known as "delayed chloroform poisoning," while in the cyclical vomiting of childhood a history of migraine in one or other parent is by no means unusual. It is impossible to judge whether or no Professor Abt's is indeed a "new" syndrome, but his paper serves to remind us that the term "acidosis," convenient hybrid though it may be, covers a multitude of metabolic errors which are not yet adequately understood or differentiated from each other.

## RECOVERY FROM DIABETIC COMA UNDER LARGE DOSES OF ALKALI.

CASES of recovery from diabetic coma are so rare as to render every one of interest. Many of the cases so recorded are open to criticism. In some the improvement was only temporary; in others the diagnosis was not clear and coma in a diabetic was not distinguished from diabetic coma. At a meeting of the Société Médicale des Hôpitaux of Paris recently M. Marcel Labbé and M. Henri Aimé reported the only successful case out of many treated by M. Labbé. A man, aged 35, had suffered from diabetes for several years. In May, 1911, when he consulted M. Labbé, he was thin, weighing 51 kilogrammes and measuring 1·6 metres, and his digestion was bad. Under a diet containing 35 grammes of carbohydrate he passed 57 grammes of sugar. Part of the glycosuria was therefore derived from proteids. The disease progressed and in May, 1912, 150 grammes of sugar were passed under a diet containing 110 grammes of carbohydrate, and the urine contained diacetic acid and acetone. In November 167 grammes of sugar were passed and the acidosis was intense, although 40 grammes of a mixture of bicarbonate and citrate of sodium were taken daily. In February, 1913, the acidosis was menacing and a flesh diet aggravated the symptoms. He was therefore put on a diet of legumens, milk, and oatmeal, and given 50 grammes of sodium bicarbonate daily. Nevertheless he became worse. On April 26th there were profound anorexia, great thirst, and dryness of the mouth. On several occasions he nearly lost consciousness. The respiration was deep, slow, and sighing, and there was a strong odour of acetone from the breath. He became comatose. An intravenous injection of 500 grammes of a 5 per cent. solution of sodium bicarbonate was given. Every hour he was given by the mouth 10 grammes of the bicarbonate and 200 cubic centimetres of Vichy water. Every three hours he took 150 grammes of milk. He drank with difficulty but did not vomit. At midnight he had ingested 127 grammes of the bicarbonate and his condition was almost stationary. He was partly conscious, being sometimes inert, sometimes agitated. He suffered from vertigo and severe occipital headache. During the night he passed several liquid fœtid stools. On the 27th there was slight improvement; the somnolence with partial consciousness continued, but the respiration was more regular. He was very thirsty and the diarrhœa persisted; eight stools were passed in the 24 hours, they were less fœtid. The abdomen was very tympanitic. The energetic administration of alkalis by the mouth was continued, 198 grammes of sodium bicarbonate being taken in the 24 hours. On the 28th there was further improvement; the depression was less profound, consciousness was regained, and respiration was more regular. He still complained of vertigo and of acute pain in the right supra-orbital region. He became somnolent several times, his speech was slow and monotonous, and he could not collect his thoughts. Œdema appeared at the ankles and spread to the scrotum. During the 24 hours, after 143 grammes of bicarbonate, the urine became alkaline. On the 29th he was further improved and free from vertigo and supraorbital pain, and he spoke more readily and in a less drawling voice. The respiration was still a little irregular. The œdema involved the flanks, the hands, and the eyelids. The dose of bicarbonate was diminished one-half. On the 30th the œdema appeared to be diminishing, and he was able to get up. He was put on a diet of eggs, legumens, and butter, and the bicarbonate was continued. On May 17th he was able to return to his home in Orleans, but the journey was very fatiguing. On the following days the œdema almost entirely disappeared. Digestion was still troublesome. He was put on a diet of milk, cereals, and legumens, and 40 to 50 grammes of sodium bicarbonate were taken daily. In August he again became comatose and died. M. Labbé insisted that in diabetic coma it was necessary to give alkalis in large doses, such as were administered in this case, and that some of the cases of failure of the treatment were due to insufficiency of dose.

## ST. GEORGE'S HOSPITAL.

AT a meeting of the house committee of St. George's Hospital held on Wednesday last letters were read from the Princess Christian and the Princess Victoria of Schleswig-Holstein regretfully declining to reconsider their resignations of the presidency and vice-presidency of the hospital respectively. Lord Plymouth also wrote declining to hold back his resignation of the post of joint treasurer, in view of the opposition of certain governors of the hospital to the proposed private inquiry which Princess Christian had desired should take place. Resolutions were passed deeply regretting these resignations. Mr. West, the other joint treasurer, having also resigned his post, a committee of 15 governors, including three members of the medical staff, was elected to appoint two new treasurers. The vacancies on the house committee were filled up. At the general court of governors to be held on Thursday next the business to be considered includes the appointment of a committee of governors to consider the laws of the hospital, a resolution regretting the action of those governors who opposed the institution of a private inquiry, and a vote of thanks to the retiring treasurers.

IN connexion with Mr. Ernest W. Hey Groves's Hunterian lecture upon the Experimental Production

and Treatment of Fractures in Lower Animals, which will be delivered to-day (Friday, Feb. 6th) at 5 P.M., we are asked to state that there will be for a short time a loan exhibition of specimen instruments and skiagrams bearing upon the operative treatment of fractures at the Royal College of Surgeons of England, Lincoln's Inn-fields.

Dr. Dundas Grant has been made an honorary member of the Laryngological Society of Berlin.

## THE HYGIENIC TESTING OF GAS FIRES BY (1) A PHYSICAL METHOD AND (2) A CHEMICAL METHOD.

HOWEVER satisfactory in a gas fire the conditions of combustion may be, it is now generally recognised that the products should not be allowed to escape into the dwelling room. The principal products of the complete combustion of coal gas are, of course, water and carbonic acid gas, with traces of sulphur dioxide. The amount of the latter will vary according to the degree of purification effected at the gasworks. The principle of heating a room by means of the circulation of hot gases, whether harmless or not, must be rejected on hygienic grounds, and so the "by-passing" of hot water vapour and carbonic acid gas (ignoring for the moment traces of sulphur dioxide) by a gas fire must be regarded as a sanitary defect. The chemistry of the leakage may not be harmful, but the physics of it is certainly opposed to healthy conditions. The unhealthy and stuffy sensations experienced in the atmosphere of an unscientifically heated room are not as a rule due to poisonous gases or even to a diminution of oxygen, but to unfavourable conditions of temperature, moisture, and flow of the air which operate against healthy respiration, and the proper functioning of the skin. Such unfavourable conditions would be engendered by a gas fire pouring a stream of hot water vapour and carbonic acid gas into the air of the room when their proper means of exit should be by a ventilating flue and chimney.

We believe that as more attention is given to this point in regard to the auto-ventilating conditions of the gas fire the use of gas for domestic heating purposes will be entirely free from objection. We are inclined to think, indeed, that what little prejudice remains arises largely because the construction of the stove, while it secures the more or less perfect combustion of the gas, does not provide for the complete discharge of the products of this combustion. The time has come, we think, when in the interests of both consumers and the industry it should be insisted that all gas fires should not only be efficient heaters but also auto-ventilators without a single defect in this respect. This qualification is naturally insisted upon in the case of the coal fire because if there is defective ventilation at the fireplace the evils of a smoky chimney are at once experienced and the smoke issues freely into the room. The products of combustion of a gas fire are of course invisible gases and their escape is not generally noticeable. Any means that can be devised to bring such products into view, so to speak, must accordingly be welcomed because we should then be able to determine definitely whether a gas fire is working under considered sets of conditions in accordance with hygienic requirements. When we can get quickly in possession of the facts as to defects, no time need be lost in finding a remedy, and in this matter we shall be guided by the kind of test referred to.

So far, the matter of testing the hygienic efficiency of gas fires has been complicated by the enforced adoption of elaborate methods of chemical analysis. If the escape of products of combustion into the room was suspected samples of the air at various points, including the near neighbourhood of the stove, were caught and taken to the laboratory for analysis, chiefly in regard to the amount of carbonic acid gas present. Such a test obviously cannot be described as a ready one, and indeed it takes some time to complete. To be of practical value a test is wanted which can be conducted, if possible, on the spot, either in the room where faulty effects are suspected, or in the workshop where the stove is examined as it should be before it leaves the makers. Two efforts have recently been made to provide such a test, the first depending upon well-known physical phenomena and the second upon chemical reactions. It is of interest to observe that the first test referred to has been devised by the representatives of a firm of well-known makers of gas fires. The chemical test had for its inspiration the principle adopted in the physical test which may now be described.

### *The Physical Test or Shadowgraph.*

This test, introduced to our notice by Mr. Walter Twigg, of the Davis Gas Company, Luton, depends upon the fact that water is the chief product of combustion of coal gas. It is clear that if it can be demonstrated that water vapour from a gas fire is issuing into the room instead of flowing up the chimney a defect of hygienic importance is disclosed, comparable with the escape of smoke from the ordinary fireplace. Everyone knows the effect of bringing a tumbler of cold water into a moist warm air. The moisture is deposited upon the glass. This is the principle of the shadowgraph method of testing gas fires, and when certain conditions are observed it demonstrates clearly, as we have witnessed, the escape of water vapour from a gas fire which is working defectively.

In practice the application of this test is carried out as follows. A piece of plate glass, called the detector plate (shown in the position of testing a gas stove in the accompanying illustration), is carefully cooled in an ice bath to such a point that its temperature is slightly above the dew point of the room in which the fire is being tested. The plate is, in other words, not cold enough to precipitate moisture from the normal air, but when it comes into contact with hot air surcharged with moisture an abundant deposit takes place. This is visible to the eye usually, but the reaction can be made obvious by means of a beam of light projected through the plate, when if the stove is "by-passing" water vapour from beneath its canopy into the room, a darkening, as though smoke was escaping from the stove, is seen upon the screen. This test has been carefully examined by well-known scientific authorities and apparently it is open to no fallacy, although it may have limitations in regard to its practical application. It has been applied to a very large number of gas

fires upon the market, with the result that a differentiation between stoves ventilating safely and those ventilating badly has easily been made. All this makes for progress, and it may be hoped that the time is not far distant when some kind of a hygienic standard will be required of the gas fire. Such a requirement would clearly do the industry no injury, as it is evident that gas fires would increase in favour if a guarantee were forthcoming that they were free from hygienic disadvantages. Prejudice against gas heating in the past has probably been founded upon a personal experience of its drawbacks, the meaning of which perhaps was that in a large majority of cases the heating efficiency was gained at the expense of hygienic efficiency. We may now look forward to the development of a system or systems which will give equal attention to both efficiencies. Even some of the modern gas fires smoke—i.e., invisibly—and this reproach must

A gas stove being tested by shadowgraph.

be removed before any system can strictly be included within hygienic boundaries. The introduction of tests rendering this leakage of "invisible smoke" visible is calculated to bring about this desirable consummation, a consummation, moreover, which we are sure the gas industry are most willing to reach. It is not in our province to enter into questions of design or construction of gas fires which will meet equally the considerations of both heating and hygienic efficiency. That is a matter for the gas fire maker to settle, but it is obvious that he will be helped considerably in this direction by a knowledge of the requirements disclosed by a simple reliable method of testing. The shadowgraph detects one of the principal products of combustion of coal gas—viz., water vapour—escaping from the gas fire. This vapour is a harmless product, but its escape from beneath the canopy of the stove into the air of the room is undesirable. As will be seen, the shadowgraph will indicate when a flow of hot gases of combustion into the dwelling room occurs, in which event the fire fails to carry off combustion products, and as long as this is the case the gas fire for domestic heating purposes cannot logically compete on hygienic grounds with the coal fire. The ventilating defects of a coal fire are self-evident in the smoke which escapes from it, and steps are soon taken to remedy this obvious inconvenience and source of discomfort; a similar remedy should apply to the gas fire.

### *The Chemical Test.*

The shadowgraph serves to furnish one method of rendering escaping gases from the gas fire visible; the chemical method about to be described furnishes another. The shadowgraph method is a direct one, while the chemical method is indirect, since it adds a constituent in very small but easily detectable quantities to the gases. It was devised in THE LANCET Laboratory (Mr. S. A. Vasey, director). When traces of chloroform or carbon tetrachloride are introduced into the mixture of air and gas drawn into the atmospheric or Bunsen burner, the products of combustion then contain hydrochloric acid which, although present in small proportion, is readily detected by coming into contact with ammonia, forming dense fumes of ammonium chloride. At first the coal gas was passed through a bottle containing carbon tetrachloride, but it was found that an unnecessary proportion of the tetrachloride was thus taken up. Later the simpler method was adopted of soaking chalk pencils in carbon tetrachloride, removing all excess on the surface by wiping with a cloth and placing these near the air inlet. The result is the introduction into the air-supply of a trifling quantity of carbon tetrachloride vapour which is ultimately converted into hydrochloric acid gas in the combustion of the coal gas, in sufficient quantity to give dense fumes when brought into contact with ammonia. All that is necessary, therefore, in testing a gas fire as to its ventilating function is to place near the air inlet an absorbent substance containing carbon tetrachloride. For this purpose a chalk pyramid was found to be as suitable as anything else, but in some cases it is more convenient to use an absorbent disc. All that remained to be done was to hold a test tube or a sponge on a wire containing strong ammonia solution at different points along the canopy of the gas fire. Any leakage or escape of combustion products is thus instantly indicated by the production of visible fumes of ammonium chloride. The advantage of this test is that any point of leakage can be located, and, moreover, the test can be applied to the gas fire fixed in position in the house. The test is very simple, and it should provide any gas inspector of ordinary intelligence with a portable outfit adapted to decide if gas fires are pouring combustion products into the room, or whether, on the contrary, they are auto-ventilating.[1] So far as this method has been tested it appears to furnish results in agreement with those obtained with the shadowgraph, and hence it supplies a ready means of discriminating those gas fires which allow a leakage of combustion products to take place from those stoves which do not. It is always easy to be assured of the test working satisfactorily by first introducing a metal baffle over the fire near

[1] Messrs. John J. Griffin and Sons, Limited, of Kingsway, London, W.C., have consented to construct a portable outfit for the purpose.

the exit, when fumes should be produced. A small iron shovel answers the purpose quite well.

In a number of tests made by this method with some modern types of gas stoves the results were in some cases satisfactory, but not in all. Further, it was found that while some old types of gas stoves leaked very badly, an improvement was shown in those stoves which though of recent design were not absolutely up to date. This finding, we think, proves the efforts on the part of the gas fire industry to improve the construction of the gas stove until it complies with the most exacting hygienic requirements. Gas stove manufacturers are now in possession of tests which promise to indicate where construction is wrong and where it can be remedied. We may therefore hope for the attainment of a hygienic standard which will place the system of heating by means of gas fires on a sound basis, and remove from it a stigma which is not always deserved, but which it is well to wipe out completely by the adoption of further improvements.

We may add that at the present moment we are undertaking an investigation with several modern types of gas fires now upon the market, employing side by side the tests we have described. We hope to publish the results shortly. In the meantime, we think it desirable to give publicity to the tests in order that it may be open to anyone to perform them, as it is felt that in this way their merits and demerits will more quickly appear. The subject is of importance in view of the rapid growth taking place in the use of gas for domestic heating purposes.

## MEDICINE AND THE LAW.

*Davis* v. *London County Council.—A Medical Man not his Employer's Servant.*

AN action was recently tried by Mr. Justice Lush, sitting with a common jury, in which damages were claimed against the London County Council by a child attending the Council's schools, suing through her next friend, and alleging that she had been injured by the negligent administration of an anæsthetic at the Council's Medical Treatment Centre. It was undisputed that the patient had been slightly burned. In giving judgment for the defendant Council Mr. Justice Lush said that even if there had been a finding of negligence the Council could not have been made liable, so that the judgment would have been the same in that case. The Council was empowered by Act of Parliament to make arrangements with medical practitioners for the necessary medical treatment of school children, and so long as it took proper care to select competent persons to do what was needed it was not liable for their negligence, if any negligence should be proved. There was no relation of master and servant between the Council and the medical men employed by it.

*A Public Duty Performed.*

In the Norwich county court recently an application of some interest was heard and adjudicated upon by his honour Judge Mulligan, K.C. The plaintiff had answered the advertisement of one Elmer Shirley, who offered a cure for catarrh and deafness. The advertisement stated that a charge of a guinea would be made for the treatment, but that if after ten days no benefit was felt the guinea would be returned "without any quibble." After a form had been filled up containing 27 questions a guinea was sent and the plaintiff made trial of the treatment for ten days, and as there was no beneficial result he returned the articles and demanded his guinea. No notice was taken at first, but later he was informed that "the parcel had not been received." He found that the Post Office could support his claim that the parcel had been duly delivered, and issued a plaint in the county court. Upon this a guinea was paid into court with 2s., the cost of the plaint. Costs on the higher scale were applied for on the ground that the plaintiff had been put to considerable expense, and that the case was one which was rightly fought by him in the interests of the public. His honour Judge Mulligan delivered judgment granting the application made and certifying for costs on Scale C. He stated that in his opinion the plaintiff had discharged a duty to the public in bringing the matter forward and in enabling the public to see how such transactions as that described were conducted. It is highly discreditable that the advertisements of Elmer Shirley should still be appearing.

*Carter* v. *Armstead.*

In this case, tried by Mr. Justice Scrutton with a special jury, Mrs. Violet Carter sued Dr. H. W. Armstead for damages for alleged negligent treatment of her left knee which had been injured by an accident. The plaintiff alleged that the defendant had failed to diagnose a fracture of the patella, and had treated her for a supposed torn ligament, and that he had never suggested the use of an X ray photograph. The defendant directly contradicted this, saying that from the first he had warned the plaintiff that she ought to have the assistance of a photograph, but that she had demurred to the expense. He had accordingly treated her, on the assumption that there was a fracture, with all possible care and skill, and if he had seen the skiagraph afterwards shown to him he would not have altered his treatment. He had suggested a second opinion, but the plaintiff had expressed herself as satisfied. Sir Anthony Bowlby and Sir Alfred Fripp gave expert evidence on behalf of the defendant to the effect that even if they had had the X ray photograph to aid them in the diagnosis of the plaintiff's injuries their treatment of her knee would have been that advised by the defendant. The jury found a verdict for the defendant, which will be endorsed by all the medical profession. The case was conducted for Dr. Armstead by the London and Counties Medical Protection Society.

## CHOLERA IN THE NEAR EAST.

(FROM THE BRITISH DELEGATE TO THE CONSTANTINOPLE BOARD OF HEALTH.)

*Cholera in Constantinople and Neighbourhood.*

AFTER the date of my last letter on this subject (published in THE LANCET of Sept. 27th, 1913, p. 955) cholera rapidly declined in the Turkish capital, and has now apparently completely disappeared. The following returns were published throughout the period during which the outbreak lasted:—

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| From | August | 2nd | to | Sept. | 7th | ... | 24 cases, | 13 deaths. |
| ,, | Sept. | 8th | ,, | ,, | 14th | ... | 7 ,, | 4 ,, |
| ,, | ,, | 15th | ,, | ,, | 21st | ... | 12 ,, | 4 ,, |
| ,, | ,, | 22nd | ,, | ,, | 28th | ... | 1 case, | 1 death. |
| ,, | ,, | 29th | ,, | Oct. | 12th | ... | 4 cases, | 2 deaths. |
| ,, | Oct. | 13th | ,, | ,, | 19th | ... | 2 ,, | 1 death. |
| ,, | ,, | 20th | ,, | ,, | 26th | ... | 1 case, | 2 deaths. |
| ,, | ,, | 27th | ,, | Nov. | 2nd | ... | 2 cases, | 0 ,, |

In all, 53 cases with 27 deaths were registered, and in

addition 7 suspected cases. These figures are perhaps below the truth, but there is no good reason for supposing that they are greatly below. Constantinople was declared a "clean" port on Oct. 2nd, and the cases which occurred later being regarded as sporadic only the port was not declared reinfected. A few cases of cholera recently occurred at Silivri, on the shores of the Marmara, and also at Rodosto, on the same coast.

*Cholera in Smyrna.*

The following figures are in continuation of those communicated in my previous letter:—

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| From Sept. | 8th | to Sept. | 13th | ... | 18 | cases, | 12 | deaths. |
| ,, ,, | 14th | ,, ,, | 21st | ... | 61 | ,, | 36 | ,, |
| ,, ,, | 22nd | ,, ,, | 28th | ... | 34 | ,, | 18 | ,, |
| ,, ,, | 29th | ,, Oct. | 4th | ... | 6 | ,, | 4 | ,, |
| ,, Oct. | 5th | ,, ,, | 12th | ... | 5 | ,, | 5 | ,, |

The last case of cholera in Smyrna was registered on Oct. 8th. In all, 293 cases and 179 deaths were recorded.

*Cholera among Returning Troops and Emigrants.*

Troops and released prisoners of war have recently been returning in large numbers to Turkish ports. I referred in my previous letter to the occurrence of cases of cholera and the detection of germ carriers among troops arriving at the lazarets of Kavak and Clazomene (near Smyrna). Recently the numbers of cholera cases and of carriers have diminished. A few certain or suspected cases have been seen in troops arriving in Trebizond, and from time to time reports are received of the detection of germ carriers in the Smyrna lazaret. Both troops and emigrants—mostly from Salonica—have been arriving in the latter lazaret in very overcrowded steamers, and there is said also to have been a considerable amount of "sanitary contraband"—that is to say, many emigrants are said to have proceeded from Salonica or elsewhere to some of the Ægean islands in Greek occupation, whence they made their way to Smyrna or some other place on the mainland without undergoing any quarantine or other sanitary measures. In Salonica itself no cases of cholera were seen after the end of September.

*Cholera in Roumania.*

The following official figures have now become available respecting the outbreak of cholera in Roumania:—

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| From August | 14th | to August | 21st | ... | 103 | cases, | 38 | deaths. |
| ,, ,, | 21st | ,, ,, | 30th | ... | 347 | ,, | 154 | ,, |
| ,, ,, | 29th (*sic*) | to Sept. | 4th | ... | 554 | ,, | 239 | ,, |
| ,, Sept. | 4th | to Sept. | 14th | ... | 1088 | ,, | ? | ,, |
| ,, ,, | 14th | ,, ,, | 21st | ... | 821 | ,, | ? | ,, |
| ,, ,, | 21st | ,, Oct. | 6th | ... | 1841 | ,, | ? | ,, |

These are the latest figures received here; they show that the epidemic has been one of considerable severity, taken as a whole, but an examination of the bulletins shows that the disease was widely spread over the country. Thus the latest bulletin contains the names of 22 infected districts, containing no less than 113 infected "communes." The communes returning the highest figures have been those of Teleorman, Romanati, Doljié, and Talomita. Many of the cases seem to have occurred among the troops during the recent mobilisation and demobilisation of the Roumanian army.

*Cholera in Russia.*

There has recently been a considerable extension of the outbreak of cholera in Russia, the beginning of which was mentioned in my previous letter. The disease first appeared in Kherson on August 13/26th. Early in September cases were reported from Nikolaieff, in the Odessa district, and an imported case (from Kherson) was seen at Zvenigorod, in the Kief government. Later the infection spread to the districts of Kherson, Odessa, and Elizavetgrad, in the government of Kherson; to those of Dneprovsk and Aleshki, in the government of the Taurida; to those of Ismailia and Akkerman, in the government of Bessarabia; to those of Nikopol and Ekaterinoslav, in the government of Ekaterinoslav; and to the town of Poltava. The latest bulletin published shows that down to the 5/18th of October 213 cases of the disease, with 85 deaths, had been registered in the various infected districts.

*Cholera in the Austrian Empire,*

Cholera has been prevalent in sporadic—almost in epidemic—form during recent months in many parts of Austria, Hungary, Croatia-Slavonia, and Bosnia-Herzegovina. In Austria 25 cases in all with 13 deaths were recorded down to the end of September, when the disease disappeared. Of these the larger number—21 cases with 11 deaths—occurred in Galicia; a single case and death were seen in Dalmatia, 1 case in Lower Austria, and 2 cases with 1 death in Bohemia. These cases included 1 imported to Vienna on August 26th in a person arriving there from Salonica by way of Budapest. In Hungary the returns officially published have been as follows:—

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Week ending | Sept. | 6th | ..... | 5 | cases, | 2 | deaths. | |
| ,, ,, | ,, | 13th | ..... | 82 | ,, | 34 | ,, | |
| ,, ,, | ,, | 20th | ..... | 89 | ,, | 42 | ,, | |
| ,, ,, | ,, | 27th | ..... | 128 | ,, | 71 | ,, | |
| ,, ,, | Oct. | 4th | ..... | 87 | ,, | 51 | ,, | |

The above cases and deaths were distributed over the "comitats" of Bacs-Bodrog, Bereg, Temes, Krasso-Szörény, Torontal, Ung, Pisti-Pilisü Solt Kiskun, Zemplen, Zala, Borsod, and Fejer.

From Croatia-Slavonia the earlier returns are imperfect, but the following bulletins have been received here:—

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| From Sept. | 14th | to Sept. | 22nd | ... | 114 | cases, | 45 | deaths. |
| ,, ,, | 22nd | ,, ,, | 28th | ... | 105 | ,, | 32 | ,, |
| ,, ,, | 28th | ,, Oct. | 5th | ... | 53 | ,, | 22 | ,, |

The bulletins contain the names of over a score of infected centres situated mainly in the "comitat" of Srijem, but also in those of Virvoitica and Pozega.

From Bosnia-Herzegovina no periodic returns have been received, but a very considerable number of both cases and deaths have been reported from a dozen or more infected centres, situated in the districts of Tuzla, Brcko, Bijeljina, Zvornik, Gracanica, and others.

Constantinople, Jan. 15th, 1914.

## ROYAL COMMISSION ON VENEREAL DISEASES.

AT the eleventh meeting of the Royal Commission held on Jan. 19th evidence was given by Lieutenant-Colonel T. W. Gibbard, R.A.M.C., head of the Rochester Row Royal Military Hospital.

Colonel Gibbard said that the most important causes of the decrease of venereal diseases in the army were the improved treatment and the instruction of the men by lectures and individual talks; other causes contributing to the reduction were greater temperance, the increased attractions of barracks, and the greater encouragement given to sports and outdoor games. The problem of the pevention of the spread of venereal diseases in the civil population could best be attacked by providing early diagnosis and treatment, by enlightening the public regarding the diseases by lectures and otherwise, and by promoting temperance. As syphilis was chiefly spread during the early stages of the disease, early diagnosis and treatment were of the greatest importance, especially now that the methods of diagnosis were so good and that by the use of salvarsan a patient was rendered non-infective in from 24 to 48 hours. For the provision of early diagnosis it was necessary that arrangements should be made whereby microscopic examinations and blood tests could be carried out free of charge to private practitioners or patients.

With regard to treatment Colonel Gibbard was of opinion that special hospitals for venereal diseases were not to be recommended; every general hospital should provide a certain number of beds for the treatment of the diseases, and these beds should be in general wards. An out-patients' department should also be organised so as to give patients every facility for early diagnosis and treatment; and the department (which should not be called venereal) should be kept open at hours suitable to the working classes. Colonel Gibbard thought that compulsory notification was most undesirable as it would lead to concealment of the disease. On the subject of education respecting venereal diseases he thought that there would be advantage in lectures being given at all large factories by selected medical men (or women where the employees were women), and that these lectures might perhaps be illustrated by kinemacolour photographs. At the lectures great stress should be laid on the importance of seeking medical advice on the first suspicion of the disease and of not consulting chemists or quacks.

The experience at Rochester Row had shown that much good might be done in this direction. The number of secondary cases among the men reporting sick at that hospital had been reduced until it was now only equal to the number of primary cases, whereas for the army generally it had been found that for every soldier commencing treatment in the primary stage five began in the secondary stage. The importance of this reduction was illustrated in the results of the treatment of 62 consecutive cases of primary syphilis during the last 18 months, which have been under observation for periods varying from 6 to 9 months from the completion of treatment. None of these cases have developed secondary symptoms, only one case relapsed, and that was probably a reinfection.

Colonel Gibbard gave an account of the methods of treatment employed at Rochester Row and of the results obtained. The use of a combined treatment of mercury and salvarsan had effected a reduction in the average number of days in hospital on first admission from 42 to 23·2, while the percentage of relapses had fallen from 33 with mercury alone to 3·9 per cent. with the combined treatment.

Questioned respecting some remarks which had been recently published regarding the dangers attending the use of salvarsan, Colonel Gibbard said that all his experience had gone to show that, provided the medical man using it had acquired and knew thoroughly the technique and contra-indications, salvarsan could be safely used, and in conjunction with mercury was the most effective cure known. At Rochester Row they had had no deaths or ill-effects following its use, and they had given more than 3000 intravenous salvarsan injections.

## THE ANNUAL REPORT OF THE MEDICAL OFFICER OF THE LOCAL GOVERNMENT BOARD FOR 1912-13.

### II.[1]

*Statistics of Tuberculosis.*

Dr. Newsholme devotes a considerable portion of his report to the statistics of tuberculosis and to the difficulties encountered in interpreting the figures available. The duty to notify pulmonary tuberculosis in all classes of practice and in the whole of England and Wales was imposed on and after Jan. 1st, 1912, and apparently the total number of cases notified during that year was 110,706—viz., 33,392 in London, 72,193 in the rest of England, 4966 in Wales and Monmouth, and 155 in ports. In the first quarter of 1913 the notified cases of pulmonary tuberculosis are stated to have been 30,788, and from Feb. 1st, when other forms of tuberculosis were also notifiable, the reported number of these cases was 15,214. The proportion between notifications of and deaths from pulmonary tuberculosis varies greatly in different parts of the country and in different parts of the same administrative area. Provisionally the report recommends that "the medical officer of health of a district in which the notifications of phthisis do not number more than twice the deaths from this disease may consider whether in his area there is not failure to notify, and whether the local administrative arrangements for the control of tuberculosis are such as to ensure the confidence of the local medical practitioners and patients." An immediate increase of notifications may be secured by facilitating the examination of sputum, and the desirability of greater public provision for this is urged in the report. Dr. Newsholme deprecates comparisons between districts as to phthisis which are based on the new notification returns, and considers that for the present death-rates furnish our most satisfactory means for determining the local incidence of tuberculosis. In regard to deaths from tuberculosis in all urban areas with a population over 20,000 and in the aggregates of urban and rural areas in each county it has been arranged that more detailed figures than those in the annual reports of the Registrar-General will be furnished by the General Register Office to the Local Government Board with a view to investigations by the medical inspectors of the department where necessary.

Tables are included in the volume which give the crude and standardised death-rates from pulmonary and other forms of tuberculosis, amongst males and females respectively, in the several administrative counties, county boroughs, and metropolitan boroughs. Two "phthisis maps" for 1911 are also given, in which some of these administrative areas are shown, shaded according to the intensity of the phthisis mortality-rate, one map relating to males, the other to females. In the counties heavy relative incidence of phthisis appears from both maps to be characteristic of the western and northern parts of Wales, particularly Cardiganshire, and of Cornwall. Among the county boroughs striking differences in rates are brought out. Thus, per 1000 living at all ages, the male phthisis death-rates in Liverpool (2·26), Manchester (2·0), Southampton (1·98), and Bournemouth (1·84) may be contrasted with those of Portsmouth (1·01), Huddersfield (0·94), Devonport (0·73), and Wigan (0·71). Although the figures are "corrected" to bring the male and female populations of the several towns to a common standard, the female rates through all the tables are frequently very dissimilar to the male rates. The corrected female rate in Manchester, for example, is only 1·08, while that of Devonport is 1·47. Dr. Newsholme frequently recurs in his report to the great influence of migration on local figures, and urges that comparison of death-rates from tuberculosis in the same area for a series of years has greater value than comparison of districts one with another.

In all the administrative areas except the rural districts the Registrar-General's figures show that the male phthisis death-rate is much higher than the corresponding female death-rate, and it is noteworthy that, while the male rate in London is nearly double that in the rural areas, the excess is only 18 per cent. in the case of females. In discussing this question and the curves of phthisis death-rates at different ages among males and females Dr. Newsholme observes that urban conditions evidently do not imply the same excess of phthisis for women as for men, or, to adopt another method of statement, that influences operate in rural districts, so far as women are concerned, which prevent them from benefiting from the more favourable general conditions of rural life—influences probably arising in connexion with the housing of the healthy and the sick. The age incidence of the maximum phthisis death-rate in both sexes is earlier in life in the rural districts than in the towns, a fact which may be regarded as due in part to migratory movements of consumptive patients, and in part to the fact that in rural districts preventive measures against tuberculosis, including housing improvements, have been less than in the towns. Dr. Newsholme looks to the new tuberculosis organisation, and the accurate recording of the antecedent medical history of each tuberculous person rendered possible by it, to enable the influence of migration and of other conditions which affect the local incidence of phthisis on age and sex, to be more accurately measured in future.

*Administrative Control of Tuberculosis.*

Part III. of the annual report of the Local Government Board for 1912–13[2] contained the summary of the important administrative work carried out during that year in regard to tuberculosis, but the present report supplements this statement by much useful information, and the various circulars and orders issued by the Local Government Board during the period are included in the volume. After describing new principles introduced by the last notification of tuberculosis order and its consolidating effect, Dr. Newsholme refers to public health action following notification, and the duties which have been placed on medical officers of health in the matter of making inquiries into notified cases. Hitherto the medical officer of health has been handicapped, except in a few places, by the difficulty of securing expert aid in examining contacts, and has been obliged to carry out this investigation more or less imperfectly. Under the new conditions it is hoped that throughout the country the services of the tuberculosis officers will be available for the work, and the report suggests that outside the county boroughs the tuberculosis officer and tuberculosis nurses, who are appointed by the county authority, should be appointed also as officers of the various district councils and sanitary authorities, possibly at a nominal salary, in order to make their position in the matter regular and enable them to act for the district medical officer of

[1] The first part of this article appeared on pp. 339-341 of last week's issue.

[2] THE LANCET, Jan. 3rd, 1914, p. 45.

health. While insisting on the importance of investigation of contacts, the report refers to the confidential nature of work under the Local Government Board's Tuberculosis Regulations and the need for caution lest the means of livelihood of the notified patient should be interfered with. It is not considered desirable, for instance, that in the case of a tuberculous domestic servant the medical officer of health should send an officer to the house where she is employed. "An interview with the patient can usually be arranged and the necessary information secured, and advice thus given to her, for instance, as to whether it is desirable for her to change her occupation." It is too early as yet to state the extent to which contacts have been examined in different areas. Under some municipalities, where administrative arrangements are well advanced, an attempt is being made to examine every willing contact either at the dispensary or at home. More often only "suspected" contacts are examined. A considerable proportion of the contacts of school age in some areas have been examined at the dispensary as the result of coöperation between the tuberculosis officer and the school medical officer.

The growth of local schemes for the treatment of tuberculosis is described, as well as the temporary measures taken, after the passing of the National Insurance Act, to inspect and approve existing voluntary and municipal institutions for the use of insured tuberculous patients. As regards domiciliary treatment undertaken under the Local Government Board's General Order of July 27th, 1912, it is stated that it will shortly be necessary to ascertain whether the records of domiciliary treatment are being satisfactorily kept, the methods and extent of supervision of the treatment by the tuberculosis officers, and whether in any direction revision of the Order is needed. The permanent local schemes for the institutional treatment of tuberculosis involve the classification of consumptive patients. The following are the officially adopted divisions:—

*Group A.*—Cases in which permanent improvement or recovery can usually be anticipated.

*Group B.*—Cases in which only temporary, though possibly prolonged, improvement may be anticipated (including patients admitted for a short term for educational treatment and some cases with advanced disease).

*Group C.*—Advanced cases requiring continuous medical care and nursing.

*Group D.*—Cases requiring special observation (including patients admitted for purposes of diagnosis, or to be watched to determine the best form of continued treatment).

*Emergency cases*—e.g., patients with hæmoptysis or requiring surgical treatment.

Sanatoriums, in the strict sense of the word, are institutions almost entirely for patients of Group A, and where they form part of the county or county borough organisation separate institutional provision has to be made for patients in the other groups. In some cases, however, the "combined institution" for all the groups is preferred, and "experience shows that there is no administrative or medical difficulty in treating advanced consumptives in the same institution as patients with earlier disease, provided that the type of sleeping accommodation for patients consists chiefly of rooms for one or two patients, or of small wards. With such an arrangement, if a section of the institution, consisting of one or two bedded rooms or small wards, is devoted to patients needing special nursing irrespective of the stage of the disease, it is impossible for the patient with advanced disease to infer the hopeless character of his illness from his place in the institution." The Local Government Board is stated to be willing to approve all the great special hospitals under voluntary management for the treatment of tuberculosis. In discussing dispensary provision, the advantage of utilising general hospitals is recognised, and special reference is made to the arrangement at St. Thomas's Hospital by which the special tuberculosis department of the hospital forms a consultation centre for the whole of the borough of Lambeth, and acts as the complete dispensary for the northern division of that borough. In rural districts a dispensary system is not always strictly applicable, and here experience is showing that dispensaries must be modified and extended to include home visiting by the tuberculosis officer. It is advantageous that the tuberculosis dispensary should be conveniently situated in relation to school clinics, to secure ready consultation in regard to doubtful cases of tuberculosis among school children.

At the present time there are few institutions which are willing to admit patients with non-pulmonary tuberculosis who require constant medical care, but for whom there is little or no prospect of recovery; considerable developments will be needed in provision for these patients.

The report indicates that a uniform system of case records at sanatoriums and dispensaries will shortly be introduced, and that the grouping of cases for statistical analysis will be based on the presence or absence of the tubercle bacillus in the discharges at some period of the illness. The report gives no indication of the extent to which tuberculin is at present employed in dispensaries, sanatoriums, or other institutions provided by local authorities, but draws attention to the need for circumspection in its use and the selection of appropriate cases for the treatment. The importance, from the preventive point of view, of securing more institutional treatment for advanced cases of consumption than that at present available is also insisted upon.

### *Research Work on Tuberculosis.*

A report by Dr. A. Eastwood states that during 1912–13 the work of the Board's pathological laboratory has principally consisted in research on tuberculosis, including investigation of tuberculosis in swine and examination of certain dairy products for the inspectors of foods. Dr. Eastwood and Dr. F. Griffith furnish a short report on the latter work as a contribution to practical questions of laboratory technique in the search for tubercle bacilli. In Dr. Newsholme's report reference is made to investigations, which will be reported upon at a later stage, into the incidence and bacteriological characteristics of tuberculous infection in children. Dr. Eastwood and Dr. F. Griffith, taking 150 post-mortem cases in children between the ages of 2 and 10 years, found in 56 no visible evidence of tuberculosis, and no evidence from experimental tests that tubercle bacilli were present in the bronchial or mesenteric glands. In the remaining 94 there was evidence of infection, and from 78 cultures of tubercle bacilli were obtained, of which 12 were of the bovine and 65 of the human type. The cases were apparently a consecutive series. In 61 of the 94 the tuberculous lesions were "sufficient in severity and extent to account for death"; in 28 tuberculous lesions were found, but death was due to other causes; and in 5 there were no visible lesions, but tubercle bacilli were recovered from apparently healthy tissues. Dr. A. S. Griffith examined at Cambridge material from 73 children dying under 12 years, finding evidence of tuberculosis in 40, and tubercle bacilli in 35, of which only 6 were bovine, and 1 both human and bovine. In the 6 bovine and in 2 of the human cases, it is stated, the portal of entry was obviously the alimentary tract. Dr. Newsholme states that Dr. A. S. Griffith admits that it is theoretically possible for a primary lesion to be produced in the lungs and bronchial glands by tubercle bacilli which have gained access to these tissues *viâ* the alimentary tract, but indicates that its occurrence without simultaneous evidence of infection of the alimentary tract or glands in connexion with it is not to be expected.

### *Miscellaneous.*

Among the contents of the volume, which from considerations of space can only here receive passing reference, are a paper by Mr. C. Strickland on the biology of the common rat-flea of Great Britain, which he finds can live at least 17 months in the presence of rubbish; and investigations by Dr. C. J. Lewis of Morgan's No. 1 bacillus and other organisms associated with epidemic diarrhœa in children. The work of sanitary administration and investigation of disease which has been carried out in various parts of the country during the year by the medical inspectors of the Local Government Board is given in brief summary, and an interesting account of various matters dealt with in the department for food inspection is contributed by Dr. A. W. J. MacFadden. Reports on the subject of offensive nuisances from linoleum manufacture, the manufacture and recovery of indiarubber, and the trade of maggot breeding are also included. The latter trade, which entails the escape of enormous quantities of flies and stench from "blown" flesh

offal, and dead animals, appears to need strict supervision by local authorities. From an instructive report by Dr. S. M. Copeman on the manufacture of indiarubber it appears that carbon bisulphide is now used to a much less extent than was formerly the case in vulcanisation, and that where it is used the installation of satisfactory ventilating arrangements appears to have had the desirable effect of obviating the production of injurious effects on those engaged in the work.

Some important changes of the staff of the department have taken place, the public health service of the country having sustained heavy losses during the year reported on through the retirement through ill-health of Dr. Theodore Thomson, C.M.G., the then first assistant medical officer, and the untimely death of Dr. L. W. Darra Mair, who had been a medical inspector of the department since 1899. Increased work has also necessitated enlargement of the establishment, and an additional assistant medical officer and two additional medical inspectors have been appointed.

# VITAL STATISTICS.

## HEALTH OF ENGLISH TOWNS.

IN the 97 English and Welsh towns, with populations exceeding 50,000 persons at the last Census and whose aggregate population at the middle of this year is estimated at 18,120,059 persons, 8776 births and 6408 deaths were registered during the week ended Saturday, Jan. 31st. The annual rate of mortality in these towns, which had been 19·3, 17·0, and 17·5 per 1000 in the three preceding weeks, further rose to 18·4 per 1000 in the week under notice. During the first four weeks of the current quarter the mean annual death-rate in these towns averaged 18·1, against a corresponding rate of 18·4 per 1000 in London. Among the several towns the death-rate last week ranged from 4·7 in Eastbourne, 8·8 in Hornsey, 10·4 in Lincoln, 10·5 in Acton, and 11·6 in Southport, to 26·2 in Newport (Mon.), 27·2 in Wolverhampton, 27·8 in West Bromwich, 30·9 in Barnsley, and 39·0 in Great Yarmouth.

The 6408 deaths from all causes were 310 in excess of the number in the previous week, and included 400 which were referred to the principal epidemic diseases, against 329 and 343 in the two preceding weeks. Of these 400 deaths, 93 resulted from whooping-cough, 93 from infantile diarrhœal diseases, 85 from diphtheria, 79 from measles, 29 from scarlet fever, and 21 from enteric fever, but not one from small-pox. The mean annual death-rate from these diseases last week was equal to 1·2, against 0·9 and 1·0 per 1000 in the two preceding weeks. The deaths attributed to whooping-cough, which had been 64, 66, and 79 in the three preceding weeks, further rose to 93 last week, and caused the highest annual death-rates of 1·2 in West Ham, in Middlesbrough, and in Newport (Mon.), 1·6 in St. Helens, 1·7 in Swansea, 1·8 in Darlington, and 2·0 in Dudley. The deaths of infants (under 2 years) referred to diarrhœa and enteritis, which had been 89, 80, and 68 in the three preceding weeks, rose to 93 last week, and included 29 in London, 7 in Manchester, 6 in Birmingham, 6 in Liverpool, and 3 each in Norwich, Bolton, Gateshead, and Rhondda. The fatal cases of diphtheria, which had been 65, 70, and 68 in three preceding weeks, rose to 85 last week, of which number 13 occurred in London, 8 in Birmingham, 7 in Portsmouth, 4 in Oldham, and 3 each in Northampton, Manchester, Bradford, and Sheffield. The deaths attributed to measles, which had been 66, 55, and 70 in the three preceding weeks, further rose to 79 last week; the highest annual death-rates from this cause were 1·6 in Middlesbrough and in Rhondda, 1·7 in Swansea, 4·0 in Dudley, 4·7 in Burnley, and 5·8 in Barnsley. The deaths referred to scarlet fever, which had been 43, 37, and 41 in the three preceding weeks, declined to 29 last week, and included 3 each in London, Salford, and Oldham, and 2 each in Birmingham, Liverpool, Sheffield, and Rhondda. The fatal cases of enteric fever, which had been 28, 21, and 17 in the three preceding weeks, rose to 21 last week, of which 3 were recorded in London, 3 in Warrington, 2 in Liverpool, and 2 in Sheffield.

The number of scarlet fever patients under treatment in the Metropolitan Asylums and the London Fever Hospitals, which had steadily declined from 4143 to 3567 in the eight preceding weeks, had slightly increased to 3599 on Saturday last; 460 new cases were admitted during the week, against 416, 388, and 375 in the three preceding weeks. These hospitals also contained on Saturday last 1105 cases of diphtheria, 246 of whooping-cough, 65 of enteric fever, and 62 of measles, but not one of small-pox. The 1557 deaths from all causes in London were 17 fewer than the number in the previous week, and were equal to an annual death-rate of 18·0 per 1000. The deaths referred to diseases of the respiratory system, which had been 511, 400, and 421 in the three preceding weeks, further rose to 425 last week, and were 32 above the number recorded in the corresponding week of last year.

Of the 6408 deaths from all causes in the 97 towns, 238 were attributed to various forms of violence, and 482 were the subject of coroners' inquests. The causes of 44, or 0·7 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in London and in its 14 suburban districts, in Manchester, Leeds, Bristol, Bradford, Hull, Newcastle-on-Tyne, and in 54 other smaller towns. Of the 44 uncertified causes of death last week, 12 were registered in Birmingham, 4 in Liverpool, 3 in Rochdale, 3 in Sheffield, and 2 each in Warrington, Preston, South Shields, and Carlisle.

## HEALTH OF SCOTCH TOWNS.

In the 16 largest Scotch towns, with an aggregate population estimated at 2,293,200 persons at the middle of this year, 1077 births and 878 deaths were registered during the week ended Saturday, Jan. 31st. The annual rate of mortality in these towns, which had been 20·2, 20·4, and 20·9 per 1000 in the three preceding weeks, declined to 20·0 per 1000 in the week under notice. During the first four weeks of the current quarter the mean annual death-rate in these towns averaged 20·4, against a corresponding rate of 18·1 per 1000 in the 97 large English towns. Among the several Scotch towns the death-rate last week ranged from 16·4 in Paisley and in Clydebank, 17·2 in Dundee, and 17·6 in Hamilton, to 25·5 in Coatbridge, 26·4 in Kilmarnock, and 37·8 in Ayr.

The 878 deaths from all causes were 41 fewer than the number in the previous week, and included 91 which were referred to the principal epidemic diseases, against 67 and 100 in the two preceding weeks. Of these 91 deaths, 48 resulted from measles, 14 from diphtheria, 12 from infantile diarrhœal diseases, 10 from scarlet fever, and 7 from whooping-cough, but not one from enteric fever or from small-pox. These 91 deaths from the principal epidemic diseases were equal to an annual death-rate of 2·1, against 1·2 per 1000 in the 97 large English towns. The deaths attributed to measles, which had been 36, 29, and 51 in the three preceding weeks, declined to 48 last week, and included 19 in Glasgow, 8 in Edinburgh, 5 in Leith, 5 in Greenock, 3 in Motherwell, 2 in Coatbridge, and 2 in Ayr. The deaths referred to diphtheria, which had been 14, 13, and 19 in the three preceding weeks, fell to 14 last week, of which 4 were registered in Glasgow, 4 in Edinburgh, and 3 in Aberdeen. The fatal cases of diarrhœa and enteritis among infants under 2 years, which had been 12, 8, and 9 in the three preceding weeks, rose to 12 last week, and included 3 in Glasgow, 3 in Dundee, and 3 in Aberdeen. The deaths attributed to scarlet fever, which had been 9, 8, and 15 in the three preceding weeks, declined to 10 last week, of which 3 occurred in Glasgow, 3 in Aberdeen, and 2 in Edinburgh. The fatal cases of whooping-cough, which had been 5, 9, and 5 in the three preceding weeks, rose to 7 last week, and included 3 in Glasgow.

The deaths referred to diseases of the respiratory system, which had steadily increased from 139 to 230 in the six preceding weeks, declined to 189 in the week under notice; 36 deaths were attributed to various forms of violence, against 26 in each of the two preceding weeks.

## HEALTH OF IRISH TOWNS.

In the 27 town districts of Ireland, with an aggregate population estimated at 1,205,280 persons at the middle of this year, 645 births and 555 deaths were registered during the week ended Saturday, Jan. 31st. The annual rate of mortality in these towns, which had been 25·4, 21·6, and 23·8 per 1000 in the three preceding weeks, further rose to 24·0 per 1000 in the week under notice. During the first four weeks of the current quarter the mean annual death-rate in these towns averaged 23·7 per 1000; in the 97 large English towns the corresponding rate did not exceed 18·1, while in the 16 Scotch towns it was equal to 20·4 per 1000. The annual death-rate last week was equal to 24·4 in Dublin (against 18·0 in London and 19·2 in Glasgow), 25·7 in Belfast, 19·7 in Cork, 22·8 in Londonderry, 24·4 in Limerick, and 32·3 in Waterford, while in the 21 smaller towns the mean death-rate was 20·7 per 1000.

The 555 deaths from all causes were 5 in excess of the number in the previous week, and included 21 which were referred to the principal epidemic diseases, against 38 and 39 in the two preceding weeks. Of these 21 deaths, 7 resulted from whooping-cough, 6 from infantile diarrhœal diseases, 5 from scarlet fever, and 3 from measles, but not one from enteric fever, from diphtheria, or from small-pox. The mean annual death-rate from these diseases last week did not exceed 0·9 per 1000; in the 97 large English towns the corresponding rate was equal to 1·2, while in the 16 Scotch towns it reached 2·1 per 1000. The deaths

attributed to whooping-cough, which had been 5, 4, and 10 in the three preceding weeks, fell to 7 last week, of which 2 occurred in Dublin. The deaths of infants (under 2 years) referred to diarrhœa and enteritis, which had been 7, 11, and 9 in the three preceding weeks, further declined to 6 last week, and comprised 4 in Dublin and 2 in Belfast. The fatal cases of scarlet fever, which had been 13, 12, and 2 in the three preceding weeks, rose to 5 last week, of which 3 were registered in Belfast. The deaths attributed to measles, which had been 8, 6, and 8 in the three preceding weeks, fell to 3 last week, all of which were recorded in Dublin.

The deaths referred to diseases of the respiratory system, which had been 154, 130, and 153 in the three preceding weeks, further rose to 157 in the week under notice. Of the 555 deaths from all causes, 178, or 32 per cent., occurred in public institutions, and 11 resulted from various forms of violence. The causes of 19, or 3·4 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; in the 97 large English towns the proportion of uncertified causes of death last week did not exceed 0·7 per cent.

## THE SERVICES.

### ROYAL ARMY MEDICAL CORPS.

THE undermentioned retire on retired pay (dated Feb. 4th, 1914): Lieutenant-Colonel Monckton O'D. Braddell and Major Charles E. P. Fowler.

Major Frederick A. Stephens is placed temporarily on the half-pay list on account of ill-health (dated Feb. 4th, 1914).

Captain Barry A. Craig to be Major (dated Jan. 29th, 1914).

The undermentioned Lieutenants to be Captains (dated Jan. 29th, 1914): Charles H. H. Harold, Eric L. Fyffe, Robert F. Bridges, Thomas J. Hallinan, Hugh G. Monteith, John D. Bowie, Charles H. Stringer, Guy O. Chambers, John K. Gaunt, and Leslie F. K. Way.

Surgeon-General W. G. A. Bedford, C.M.G., has taken up duty on the Headquarters Staff of the South African Command as Deputy Director of Medical Services, vice Surgeon-General O. E. P. Lloyd, V.C., C.B., retired.

Colonel G. D. Hunter, D.S.O., has taken up duty at Allahabad Cantonment as Assistant Director of Medical Services to the Allahabad Brigade.

Lieutenant-Colonel C. Cooper-Reilly has been selected for appointment to hold charge of the Military Hospital at Calcutta, vice Brevet-Colonel F. Smith, D.S.O. Lieutenant-Colonel N. Manders has embarked for a tour of service in Egypt. Lieutenant-Colonel F. W. Begbie has taken over charge of the Military Hospital at Maymyo Cantonment. Lieutenant-Colonel H. E. Winter has been placed under orders for a tour of service with the Northern Army in India, vice Lieutenant-Colonel G. A. T. Bray, transferred to Chelsea from Canterbury.

Major J. W. H. Houghton has taken up duty at the Military Hospital, Meerut. Major G. St. Clair Thomson, in charge of the Military Hospital at Glencorse, has been selected for appointment as Deputy Assistant Director of Medical Services to the Lowland Division. Major A. L. Scott has embarked for service in India. Major J. W. West has been granted six months' general leave of absence home from India. Major C. R. Miller has been appointed to the Military Hospital at Cork for duty. Major F. S. Penny has been appointed to the Cork District. Major H. Herrick has been placed under orders for duty in the Irish Command. Major A. C. Duffy has been granted six months' general leave of absence home from India. Major D. E. Curme has been transferred from Aldershot to the Northern Command. Major C. C. Cumming has left England for a tour of service at Malta. Major W. E. Marshall has been appointed to the Cork District for a tour of duty. Major G. Baillie has taken over charge of the Military Hospital at Landguard Fort.

Captain A. W. Howlett has been appointed to the Aldershot Command. Captain H. V. B. Byatt has been transferred from the Military Hospital at Purandhur Cantonment to Poona Cantonment. Captain E. D. Caddell has been appointed to the Dublin District for duty. Captain E. B. Lathbury has been appointed for duty on board the transport s.s. *Plassy* sailing from India. Captain W. J. Tobin has arrived home on leave of absence from the Bangalore Cantonment. Captain T. S. Dudding has embarked for India. Captain J. H. Douglass has been placed under orders to embark for a tour of service in the Sierra Leone Protectorate. Captain A. T. Frost has taken up duty at the Military Hospital, Calcutta. Captain R. D. O'Connor has been appointed for duty on board the transport s.s. *Rohilla* leaving Karachi for Southampton. Captain K. A. C. Doig has embarked for India. Captain C. W. Bowle has been appointed to the Belfast District for duty. The following Captains have taken up duty at the Royal Army Medical College, Grosvenor-road, for the courses of instruction for promotion to the rank of Major: J. James C. McQueen, G. S. Parkinson, G. H. Stack, A. W. Bevis, and R. H. Nolan. Captain E. M. Middleton has been appointed to the Eastern Command. Captain R. W. D. Leslie has been transferred from the Rifle Brigade Depôt at Winchester to the Military Hospital at Gosport. Captain L. Cotterill has embarked for a tour of service in India. Captain B. Johnson has taken up duty in the Cork District. Captain R. G. H. Tate has been appointed to the Irish Command. Captain M. P. Leahy has been transferred from medical charge at Maryborough Head to the Military Hospital at Dublin. Captain H. W. Farebrother has taken up duty at Meiktila. Captain H. St. M. Carter has been transferred from the Royal Victoria Military Hospital at Netley to the Aldershot Command. Captain J. B. Hanafin has taken up duty at the Military Gharial, Murree Hills District. Captain A. W. Byrne has been appointed to the Military Hospital at Kasauli. Captain R. E. Humfrey has embarked for a tour of service in India. Captain W. H. S. Burney has been transferred from Khanspur to the Military Hospital at Campbellpore. Captain W. J. Thompson has joined the Aldershot Command.

Lieutenant B. H. H. Spence, on arrival in India, will be appointed to the Second (Rawal Pindi) Division of the Northern Army. Lieutenant B. Biggar has been transferred from the Military Hospital at Cairo to Alexandria. Lieutenant C. M. Ingoldby has taken up duty at the Military Hospital, Fermoy. Lieutenant E. V. Whitby has joined at Kilworth Barracks. Lieutenant H. S. Blackmore has embarked for a tour of service with the Ninth (Secunderabad) Division of the Southern Army in India. Lieutenant W. McNaughtan has been transferred from the Royal Victoria Military Hospital at Netley to Devizes. Lieutenant C. Helm has joined at Dublin. Lieutenant D. W. Bruce, on arrival in India, will be appointed to the Third (Lahore) Division of the Northern Army. Lieutenant J. S. Hepper has been transferred from the Military Hospital at Bulford Camp to Upavon, Salisbury Plain District. Lieutenant E. P. A. Smith has embarked for a tour of service with the Eighth (Lucknow) Division of the Northern Army in India. Lieutenant M. Burnett has been transferred from the Military Hospital at Cosham to the Rifle Brigade Depôt at Winchester. Lieutenant E. C. Beddowes has taken up duty at Kildare on transfer from the Curragh Camp.

### ROYAL ARMY MEDICAL CORPS EXAMINATION.

The following is a list of successful candidates for commissions in the Royal Army Medical Corps at the competition held in London in January, for which 42 candidates entered:—

| | Marks. |
|---|---|
| *T. O. Thompson, B.A., M.B., B.Ch. Oxon., Oxford University and St. George's Hospital | 601·5 |
| S. J. Linzell, M.B., Ch.B. Edin., Edinburgh University | 584·5 |
| *S. R. Shore, B.A. Cantab., M.R.C.S. Eng., L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital | 580 |
| *J. G. Gill, M.B., Ch.B. Edin., Edinburgh University | 565·5 |
| *J. W. C. Stubbs, B.A., M.B., B.Ch., B.A.O. Dub., Trinity College, Dublin | 557·5 |
| *S. M. Hattersley, B.A., M.B. Cantab., M.R.C.S. Eng., L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital | 556 |
| *D. W. Rintoul, M.B., B.S. St. And., St. Andrews University | 552 |
| A. Watson, M.B., Ch.B., D.P.H., D.T.M. Edin., Edinburgh University | 547·5 |
| *N. V. Lothian, B.S., M.B., B.Ch. Glasg., Glasgow University | 545 |
| *T. F. P. Breen, B.A., M.B., B.Ch., B.A.O. Dub., Trinity College, Dublin | 540·5 |
| J. F. G. Gywnne, M.B., Ch.B. Sheffield, Sheffield University | 533 |
| A. J. A. Menzies, M.A., M.B., Ch.B. Edin., Edinburgh University | 529 |

* These gentlemen, being in possession of certificates obtained in the Officers Training Corps, were awarded service marks under paragraph 71 of the Regulations for the Officers Training Corps.

### INDIAN MEDICAL SERVICE.

Surgeon-General W. B. Bannerman has been appointed an Honorary Physician to His Majesty the King, vice Surgeon-General J. Richardson, deceased.

Lieutenant-Colonel C. A. Johnston has been selected for appointment as officiating Agency Surgeon of the Second Class and posted temporarily as Residency Surgeon at Mysore in addition to his own duties. Lieutenant-Colonel R. C. MacWatt has been appointed Agency Surgeon to the Eastern States of Rajputana. Lieutenant-Colonel J. G. Hojel has been granted leave of absence home from India for one year.

Major E. E. Waters has been appointed to officiate as Second Physician at the College Hospital, Calcutta. Major T. H. Delany has arrived home on leave of absence from India. Major E. J. Morgan, civil surgeon at Sitapur, has been granted privilege leave of absence combined with furlough home from India for six months. Major J. E. Clements has been appointed permanently to the Jail Department of the United Provinces of Agra and Oudh.

Major N. Walker has arrived home on leave of absence from India. Major T. Hunter has been granted an extension of furlough. The services of Major A. C. MacGilchrist have been placed temporarily at the disposal of the Director-General, Indian Medical Service, for special research duty.

Captain C. H. Brodribb has been selected for appointment as Specialist in Advanced Operative Surgery. Captain D. D. Kamat has been appointed to the Civil Medical Department of Bombay Presidency. The services of Captain A. C. Ingram have been placed permanently at the disposal of the Government of Madras Presidency. Captain R. S. Kennedy has taken up duty under the Military Department. Captain A. K. Luddie, civil surgeon at Ludhiana, has been transferred to Dera Ghazi Khan, relieving Captain N. M. Wilson transferred to Gurdaspur and appointed Plague Medical Officer. Captain J. Cunningham has taken up special duty under the Director-General. Captain W. S. J. Shaw has been granted combined leave of absence home from India for 15 months. Captain O. A. R. Berkeley-Hill has been appointed to officiate as Superintendent of the Central Lunatic Asylum at Yeravda. Captain F. W. Cragg has been appointed to officiate as Assistant Director of the Central Research Institute of India at Kasauli Cantonment during the absence on deputation of Captain J. Cunningham. Captain J. Taylor has been appointed to officiate as Assistant Director of the Bombay Bacteriological Laboratory during the absence on leave of Captain W. D. H. Stevenson.

### INDIAN MEDICAL SERVICE EXAMINATION.

The competitive examination for commissions in His Majesty's Indian Medical Service was held on Jan. 26th, 27th, 28th, 29th, 30th, and 31st at the Royal Army Medical College and the Medical Examination Hall for 20 vacancies. All the candidates reached the number of marks required to qualify. The following are the names of the successful candidates with their medical schools, qualifications, and marks obtained out of an aggregate of 5100:—

| | Marks. |
|---|---|
| George Henry Mahony, B.Sc., M.B., B.Ch., B.A.O., University College, Cork | 3656 |
| William Ross Stewart, M.B., Ch.B. Edin., Edinburgh University | 3400 |
| Gordon Covell, M.B., B.S. Lond., Guy's Hospital | 3375 |
| John Gregory Owen Moses, M.B., Ch.B. Edin., Edinburgh University | 3281 |
| Koty Venkata Ramana Rao, L.R.C.P., M.R.C.S., London Hospital | 3241 |
| Hari Chand, L.M.S. Punjab, L.R.C.P., M.R.C.S., Lahore Medical College and Charing Cross Hospital | 3208 |
| Jacob William Van Reenen, M.B., Ch.B. Edin., Edinburgh University | 3163 |
| Venkata Subba Mahadevan, L.M.S. Madras, L.R.C.P. & S. Edin., L.F.P. & S. Glasg., Madras and Royal Infirmary, Edinburgh | 3156 |
| Alured Charles Lowther O'Shee Bilderbeck, B.A. Cantab., M.B., B.S. Lond., L.R.C.P., M.R.C.S., Cambridge University and St. Bartholomew's Hospital | 3142 |
| Maurice James Roche, M.B., B.Ch., B.A.O., National University, Ireland, Queen's College, Cork | 3119 |
| Basil Fraser Beatson, L.R.C.P., M.R.C.S., St. Mary's Hospital | 3112 |
| Nehchal Das Puri, M.B., B.S. Punjab, Lahore Medical College | 3068 |
| Prabodh Chandra Roy, M.B. Calcutta, Calcutta Medical College | 3044 |
| Monindranath Das, M.B. Calcutta, L.R.C.P., M.R.C.S., University College Hospital | 3009 |
| Jagannath Balkrishna Vaidya, L.M. & S. Bombay, L.R.C.P., M.R.C.S., University College Hospital | 2983 |
| Joseph Martin Reeves Hennessy, L.R.C.P. & S. Edin., L.F.P. & S. Glasg., College of Surgeons, Edinburgh | 2823 |
| William Mawhood Lupton, B.A. Cantab., L.R.C.P., M.R.C.S., Cambridge University and St. Thomas's Hospital | 2815 |
| Alfred Glen Cowper, L.R.C.P. & S. Edin., L.F.P. & S. Glasg., Royal College of Surgeons, Edinburgh | 2808 |
| Hubert Horan Brown, B.A., B.C. Cantab., L.R.C.P., M.R.C.S., Leeds University | 2757 |
| Charles Henry Niel Baker, L.R.C.P. & S. Edin., L.F.P. & S. Glasg., Surgeons' Hall, Edinburgh | 2716 |

### SPECIAL RESERVE OF OFFICERS.

Raymond John Clausen, late Cadet, University of London Contingent, Officers Training Corps, to be Lieutenant (on probation) (dated Jan. 9th, 1914).

### TERRITORIAL FORCE.

*Royal Army Medical Corps.*

1st South Western Mounted Brigade Field Ambulance, Royal Army Medical Corps: Transport Officer and Honorary Lieutenant William H. R. Alexander resigns his commission (dated Feb. 4th, 1914).

3rd East Lancashire Field Ambulance, Royal Army Medical Corps: Supernumerary Lieutenant Kingsmill W. Jones ceases to serve with No. 18 Field Ambulance, Royal Army Medical Corps, Special Reserve, and is restored to the establishment (dated Feb. 4th, 1914).

*Attached to Units other than Medical Units.*—Lieutenant Henry E. S. Richards to be Captain (dated Dec. 15th, 1913). Captain Albert E. Vidler resigns his commission (dated Feb. 4th, 1914). Lieutenant William F. Roach resigns his commission (dated Feb. 4th, 1914).

*For Attachment to Units other than Medical Units.*—Alexander Grant Vermont van Someren to be Lieutenant (dated Jan. 1st, 1914). Thomas Jones Mackie to be Lieutenant (dated Jan. 13th, 1914).

### DEATHS IN THE SERVICES.

Lieutenant-Colonel R. D. Hodson, R.A.M.C., at Bournemouth recently, in his sixtieth year. He served in the Afghan war 1878-80, and was present at the occupation of Kandahar (medal). He also took part in the operations in Cape Colony, south of the Orange River, 1899-1900 (awarded the Queen's medal and clasp).

### BULLETIN OF THE NAVAL MEDICAL ASSOCIATION OF JAPAN.

The August, 1913, number of this publication, which is issued by the Naval Medical Association at Tokyo, is printed for the most part in Japanese character, but has a summary of the contents in English. Surgeon-Inspector Y. Suzuki records a case of Primary Carcinoma of the Lungs, Fleet-Surgeon S. Kurita describes the Treatment of Epidemic Cerebro-spinal Meningitis by Intraspinal Injection of the Serum, Fleet-Surgeon T. Hanawa contributes a case of Actinomycosis of the Liver with Schistosomiasis (Katayama Disease), Staff-Surgeon T. Tanaka describes a case of Aneurysma Dissecans, and Surgeon T. Kabeshima has an article on the Hæmolytic Action of Cholera Vibrio, and also contributes the first part of an Investigation into the Biological Characters of Cholera Vibrio. Homologous Bodies of Adrenalin is the title of a paper by Apothecary S. Isono.

### THE INDIAN AMBULANCE GAZETTE.

The January issue of this quarterly has among its many illustrations a full-page reproduction of a portrait of Lady Hardinge, lady president of the Indian branch of the St. John Ambulance Association. The journal is full of interest to ambulance workers and contains indications of the increasing growth of the movement in our great eastern empire.

### A RED CROSS JOURNAL.[1]

The first number of a new monthly journal, which is to be the official organ of the British Red Cross Society, was issued in the middle of January. The journal is well printed, fully illustrated, and shows great promise. In addition to brief paragraphs detailing the work of the various county branches of the society there are several articles of general interest. Over a facsimile signature of Sir Frederick Treves appears some practical advice for the use of members of the Red Cross in war; Dr. F. M. Sandwith describes the origin of the Red Cross training centres; and Major Doughty-Wylie, C.M.G., contributes a first instalment of a diary of the British Red Cross Units on War Service in Turkey, being the story of the Turko-Balkan War of 1912-13. A full-page supplement in colours shows the proficiency, county, merit, and technical badges and bars of the society, and among other illustrations there are reproductions of portraits of Queen Alexandra, who as the President of the Red Cross Society wishes it every success and continued progress, the Duchess of Montrose, the Marchioness of Graham, and Sir Ernest Cassel. We congratulate the society on the first issue of their journal.

### AEROPLANES IN WAR.

The increasing interest which is being taken in the use of aeroplanes in war is shown in a statement made by Lieutenant-Colonel W. C. Beevor at the annual meeting of the Staffordshire Branch of the Red Cross Society on Jan. 31st. After referring to the keen interest of the War Office in Red Cross work, he said that during the summer the Red Cross Society would demonstrate in the Victoria Park, Leicester, the advantages of aviation in the transport of the wounded. The War Office will supply the aeroplane which will be used for this purpose.

[1] The Red Cross, No. 1., Vol. I., Jan. 15th, 1914. Published at 9, Victoria-street, London, S.W. Price 3*d*., or 3*s*. per annum including postage.

### DEATHS OF EMINENT FOREIGN MEDICAL MEN.

The deaths of the following eminent foreign medical men are announced:—Dr. A. Laguesse, formerly professor of natural history in the Dijon Medical School.—Dr. Ottavio Morisani, formerly professor of midwifery and gynæcology of the University of Naples, foreign member of the Paris Academy of Medicine.—Dr. Openkhofski, professor of clinical therapeutics and Director of the Kharkoff University Medical Clinic.—Dr. Karl Albert Neufeld, one of the directors of the Würzburg Institute for the Examination of Foods, aged 48.—Dr. Guido Weber, of Dresden, Privy Councillor, and for many years Director of the Sonnenstein Hospital, aged 77.—Dr. Paul Bartels, *privat-docent* of anatomy in the University of Königsberg and author of various papers on anthropological topics. His age was 39.—Dr. John Caven, formerly professor of pathological anatomy in Toronto University.—Dr. Frederick J. Busch, professor of physiology in the medical department of the University of Buffalo.

# MEDICAL PRACTICE UNDER THE INSURANCE ACT.

(BY OUR SPECIAL COMMISSIONER.)

(*Continued from p. 347.*)

## XXXVI.—LONDON: THE AGITATION AGAINST THE ACT.

THOSE who maintain that the National Insurance Act is working satisfactorily even in London argue that this is proved to some extent by one fact among others—viz., that so few persons have contracted out of the operation of the Act. It is claimed that none the less great leniency has been exercised by the London Insurance Committee. Out of 245 applications recently sent in by insured persons who wanted to make their own arrangements only three were refused. It is true that at the beginning of last year little notice was taken of the wholesale applications made. Apparently they were not considered *bond fide* but put down solely to political motives. When applications came in the normal manner they received full attention and liberal treatment. Throughout the County of London there are 1600 in all insured persons who have made their own arrangements—that is to say, have contracted out of the Act. At first sight this may not seem a noteworthy proportion out of a million and a half insured persons, but it is larger than obtains in many other places. By Dec. 8th, 1913, those insured persons who wished to change their doctors should have notified to that effect. Rather under 12,000 such applications were lodged, and this is considered a sign that there is very little dissatisfaction. If the insured in any general way had found they were not being well looked after, it is argued, a much greater number would have signified a wish to change their doctor. But that 1 insured person out of every 104 should be so dissatisfied with his medical adviser as to effect a change seems to me a large proportion. This figure I obtain by dividing the 1,250,000 insured persons who have selected a panel doctor by the 12,000 who desire to change to some other doctor, without, however, making allowance for removals within the vast county area of London. It is well known that among the poorer and more ignorant and listless sections of the population the freedom to change their medical adviser is illusory. It means writing, filling up forms, and doing things which this class of people dread to attempt. They will grumble loudly, but do not often take the trouble to inform themselves as to what they should do, or, further, take the trouble to do it correctly. Therefore the figures giving the number of changes effected do not represent to the full the dissatisfaction that exists. Of course, a certain amount of dissatisfaction was to be expected, because some of the practitioners on the panel are obviously overworked and others are not good workers.

### *West End Panels and Domestic Servants.*

It is in the West End of London that the much-discussed servant question is of real importance. The shortage of doctors on the panel is greatest in the districts of London where there is the largest proportion of practitioners to the population. In such areas an appreciable part of the employed population, or insured or insurable persons, are domestic servants. This is a class that pays the medical men on the panel, I am told, very well. The fact that they are insured shows that they are employed, and very few families would engage a sickly domestic servant. Therefore, and especially if compared with the poorer section of the working-class population, they are an exceptionally healthy set of people. Nor is there anything in their occupation that renders them susceptible to special trade diseases. Panel practice among domestic servants should consequently pay well. The figures given by the Domestic Servants' Insurance Society clearly demonstrate this fact. This is one of the Approved Societies and, as it consists mainly of domestic servants, the estimated cost of sick benefits was put down at a low figure. As a matter of fact, however, only half the sum allowed was actually required, thus proving that there had been very little sickness. Many West End doctors, I was assured by partisans of the Act, had lost a great deal by refusing to join the panel, and were now discovering that the fees they received from well-to-do families were not sufficient by themselves. Had they a panel list with a few hundred domestic servants on it, this would add very little to their work and make a regular source of income. This is, of course, one view, and I incline to take it almost unreservedly, but it seems inherent to all questions arising under the working of the Act in London that there should be two diametrically opposite sides. One panel practitioner I heard of who said that the domestic servants gave him considerable trouble as exacting and often imaginary invalids, while many householders would deny the statement that domestic servants as a whole formed a healthy class. The horrible habit of fifty years ago of providing them with bad sleeping quarters and inferior food has largely disappeared, but it seems that in spite of the healthier environment there is much dyspepsia, anæmia, and rheumatism among cooks, housemaids, and parlourmaids.

A good many partisans of the Act consider the West End practitioners are not behaving well by refusing to go on the panel. They should not, it is urged, stand out against a measure which works satisfactorily in industrial areas and is of benefit to the profession as a whole. It would be very easy for them to join the panel in the residential districts. They would probably have only a few hundred insured persons on their lists, and this small number would hardly interfere with their usual work. But if they persist in decrying the panel system, what alternative do they offer? Practically there is none other save a State Medical Service, and perhaps they would find this less to their liking than the present panel system.

In a way it is satisfactory that the shortage of doctors on the panel should be in districts where many practitioners live. For why should all do what some are found to do? There is less danger in such districts of the public being neglected. On the other hand, as soon as work is left by some for others to discharge the risk of creating class feeling is run, and this is a serious matter within the ranks of a highly standardised profession. It seems to me that if the domestic servants had been allowed to contract out, as many of them wished to do, much feeling against the Act would have been avoided.

### *Special Objection to the Act by London Practitioners.*

The arguments in favour of the Act and of joining the panel have not been left without answer. There are the general objections to the Act which have been made throughout the country, and which I have had many opportunities to record. But it is further urged that club practice in London—that

is to say, the form of contract practice which preceded the Act—had fallen to an exceptionally low point. The fear is that the panel doctor will become as the club doctor of the past. In the provinces it is quite different, and the smaller the place is the more mixed must the practice of the local medical man become. But in London classification of practices is more strict because it is more easy to apply. It is in these days, professionally speaking, of profound importance that medical practitioners should not be divided into classes between which the public may tend to discriminate, while the whole medical body is now educated to such a high standard. In London the perpetuation of contract practice was particularly feared, because of the idea that the practitioners employed in this way might come to be regarded as a class. The obvious way in which this would have been avoided was by an inclination on the part of many medical men to join the panel; when abstentions became common the panel practitioners became a class by themselves to this extent that they have entered into organisations to protect their interests.

### *The Campaign against the Act.*

The first thing attempted, it will be remembered, in carrying out the recommendations of the British Medical Association at the time when the Association was opposed to the Act, was to form a Special Provisional Medical Committee for the entire London County Council area, which is also the area of the Act. This was constituted on the sound basis of representatives for each borough, varying in number according to the population of the borough. Up to the end of 1912 nothing much, however, was done. But few meetings were held because it was thought the Act would not be worked. But when Christmas approached and it seemed evident that, after all, the Act would come into operation, a big fight was inaugurated by a meeting held a few days after Christmas, the Christmas holidays sadly handicapping the leaders in their efforts.

As might be expected, complaints were made that no one was doing anything, though there was urgent need for immediate action. The British Medical Association, while refusing to organise a campaign against the Act, allowed the members of the Provisional Medical Committee the use of their rooms. Thereupon this committee disappeared by turning itself into a new and fighting organisation called the London Medical Committee. The new body at once displayed remarkable activity. They supplied a vast amount of information to the press; caused a great number of questions to be put in Parliament; lobbied Members of Parliament on every possible occasion, and placarded districts of London with the "Insist on your own Doctor" poster. Meetings of insured persons were convoked, fiery speeches were delivered. The audiences were urged to claim their right to contract out of the Act. Leaflets were published and widely disseminated. The members of the London Medical Committee themselves commenced the agitation by each subscribing £25 towards the expenses.

As a result of this agitation the London Insurance Committee was flooded with applications from insured persons for permission to make their own arrangements. As a counterblast Form 43 I.C. was issued by the Commissioners making the conditions for doctors who attended insured persons, though they are not on the panel, if anything worse than if they had been on the panel. All these struggles and contests made it more and more attractive to some of the opponents of the Act to form something approaching a trade union. A committee was, therefore, appointed to consider the matter. In spite of the prejudice that exists in some quarters against trade unions it was ultimately decided that there was no other course of action available. The London Medical Committee, therefore, brought into existence the National Medical Guild, which was registered, according to law, as a trade union. Thus the new organisation obtained the immunities and powers which trade unions enjoy. It also secured the right to provide various sorts of insurance for medical men and to levy funds, so as to run candidates for Parliament. Of course, such a society could not limit its action to the London area, so it was extended to the whole of the United Kingdom. The annual subscription was fixed at 1 guinea, and this also gave the right of medical defence, either individually or collectively. A general secretary was appointed and offices secured at 34, Villiers-street, Strand, W.C. One of the most notable cases successfully taken up by the Guild was that of Heard *v.* Pickthorne. This has established the right of non-panel doctors to give certificates to insured persons, so that they can claim and obtain whatever sick benefits are due to them. This Guild also brought to light the fact that some Insurance Committees were allowing insured persons to contract out of the Act, not so as to make their own arrangements with qualified practitioners who are not on a panel, but with unqualified persons. As a trade union, also, the Guild is sheltered to a large extent from the danger of actions under the conspiracy and libel laws.

Once this Guild was definitely formed, its parent, the London Medical Committee, separated itself off. Naturally a trade union must be open to all the members of the trade, or, as in this case, of the profession. Therefore panel doctors as well as non-panel doctors are admitted as members. This provides a reason for the London Medical Committee to continue its existence as a purely non-panel organisation. Many non-panel bodies have been brought into existence throughout the country, notably the National Medical Union founded at Manchester, and some, like the non-panel medical league at Brighton, do not exist any more to-day. In London, however, there still remains a widespread and definite opposition to the Act.

The National Medical Guild is not intended in any way to oppose the British Medical Association. It was created, not in any spirit of hostility or of competition, but simply because the constitution of the British Medical Association precludes its becoming a trade union. The legal formalities that would have to be accomplished are such that it would take, I am assured, two years for the British Medical Association to become a trade union.

Many events followed upon the constitution of the Medical Guild, and the London Medical Committee is likely to be merged in a much larger organisation of non-panel doctors. The history of the evolution of the various organisations cannot be given in a single article, and there are many different motives inspiring different policies. Much, therefore, remains to follow, while the conflicting opinions of those who have taken a prominent part in the struggle will have to be recorded. Consequently my story is far from its end.

*(To be continued.)*

# Home and Foreign Notes.

(FROM OUR OWN CORRESPONDENTS.)

## BIRMINGHAM.

*Memorial Window to Sir Thomas Chavasse.*

THE stained-glass window erected in Bromsgrove parish church in memory of the late Sir Thomas Chavasse was dedicated on Jan. 29th. The ceremony was performed by Sir Thomas Chavasse's brother, the Bishop of Liverpool, in the presence of a large congregation. The window, which is at the west end of the south aisle, consists of four lights. The centre of the upper lights is occupied by the figure of Christ, on either side of whom are St. Michael and the angel Gabriel. Across the four main lights, which are extremely rich in colouring, runs the text, "Honour a physician with the honour due unto him, for the Lord hath created him." The lights are occupied in the main by four Old Testament characters: Moses, holding up the brazen serpent; Elijah, being fed by the ravens; Elisha, receiving the double gift of the Holy Spirit; and Isaiah with the figs. Above the figures are the crests of the Chavasse family, of the Royal Colleges of Surgeons, and of the Universities of London and Edinburgh, and beneath are illustrations of healing specially concerned with the lives of the prophets depicted. The window is by Messrs. Powell and Sons, of London, and has been erected by Lady Chavasse and the family.

*Treatment of School Children.*

Birmingham was among the first municipalities to provide means for treating school children in need of medical and surgical aid, but the danger of impairing parental responsibility was kept steadily in mind. A scale of fees was drawn up, and parents were required to pay for the attention received, though in the case of parents honestly unable to afford the very moderate payments power to remit the fees was rightly reserved. The result was that it was discovered that parents who showed gratitude were relatively few, while parents who had a rooted objection to paying anything at all were many. The hygiene subcommittee, presided over by Mrs. G. Cadbury, has now brought forward the following recommendations to the education committee: (1) That as far as dental treatment is concerned, a scheme be established which makes no charge for treatment; (2) that the charge for the provision of spectacles remain as at present, viz., 2*s.* 6*d.* per pair; (3) that for the treatment of tonsils and adenoids some definite charge should be made, but that this charge should be at a flat rate, without any sliding scale, such charge to be one which can be paid by the average family, viz., 1*s.*; (4) that no charge be made for the treatment of external minor ailments; (5) that, as already decided by the education committee, cases of ringworm necessitating X ray exposures be treated free of charge, and that other cases of ringworm also be treated free of charge. It was stated that several authorities were giving free medical treatment, and ten of them had had their accounts audited without question as to the legality of the expenditure thus incurred. There was much opposition to the proposals by other members of the education committee, and they were referred back to the subcommittee.

Feb. 3rd.

## SCOTLAND.

*Overlapping by Edinburgh Charities.*

IN a circular which has been issued by the City of Edinburgh Charity Organisation Society it is pointed out that about two years ago a general register of persons in receipt of relief from any source was instituted by the society, and if the scheme is to be wholly successful it is necessary to have the support and coöperation of the churches and missions, who are invited to send in at intervals lists of their annuitants and those in receipt of temporary relief. The register has been instituted not for the purpose of cutting off any person from relief, but in order that the benefactors may be aware of what help is being given in each case. This register, which is strictly private and confidential, is quite separate from a record kept in the society's office of impostors of various kinds.

*Health of School Children in East Lothian.*

Dr. Buchanan, school medical officer for East Lothian, has issued a report dealing with the medical treatment of school children after they have been subjected to inspection. The medical defects most urgently calling for attention, and which could be included in the scheme, were defective teeth, defective vision, enlarged tonsils, and discharging ears. The first two were the most widespread conditions, and Dr. Buchanan is of opinion that the scheme for medical treatment should at first be limited to these. The question arose, Should the education committee deal with necessitous children only? He is of opinion that any scheme which was limited to one class must fail to be efficient. Dealing with the matter of defective teeth, Dr. Buchanan expresses the opinion that, even making a generous estimate, there were not more than 20 per cent. of the children in the county with perfect teeth.

*Perthshire Branch of the British Red Cross Society.*

At the annual general meeting of the Perthshire Branch of the British Red Cross Society (Scottish branch) it was stated that the total number of detachments in the county was 42, as against 37 in the previous year, and these had a *personnel* of 222 men and 722 women. Financially, the position of the movement in the county is satisfactory, as the branch has a balance in hand of £165, of which £97 represents the special equipment fund. It is intended next summer to hold Red Cross camps in connexion with the Regular or Territorial camps, and an attempt is to be made to ascertain how many of the men are likely to join these camps in order to make them a success.

*Royal Hospital for Children at Glasgow.*

At the thirty-first annual meeting of the subscribers to the Sick Children's Hospital an appeal was made for £16,000 to enable the new hospital to be opened free from debt. It was announced that only 1200 of the population of Glasgow subscribed to the funds of the hospital, and it was also intimated that that day a cheque for £500 had been received from an anonymous donor, with the promise of an additional £500 if the rest of the £16,000 was collected before the end of the year.

*Glasgow Infant Health Visitors' Association.*

The seventh annual report states that this association has now over 400 visitors, and during the year nearly 5000 babies were under visitation. By coöperating with the day nurseries and with the

school boards of Glasgow and Govan great assistance had been got in the work, and the vital statistics of the medical officer of health showed it had not been fruitless.

*Insurance Act Affairs in the North.*

At a recent meeting of the Aberdeen Burgh Insurance Committee it was intimated that the chemists' accounts for the last quarter showed a large increase over former quarters, so much so that in all probability the 2*s.* per head set aside for drugs would be exceeded. Under the circumstances, the clerk was instructed to pay only such a proportion of current accounts as would keep the drug and suspense account within the statutory limits. It was decided that inquiry, if necessary with the help of an expert, should be made into the causes of the excess. The Commissioners are also inquiring into the causes of the excessive payments on the drug fund in Aberdeen, all prescriptions of 11*d.* and over in value being sent for their inspection. The Medical Benefit Committee have decided by a majority that only doctors with 1000 or fewer insured persons on their panel shall share in the allocation of insured persons who have neglected to choose a doctor.

*British Medical Association Meeting in Aberdeen.*

Provisional arrangements are well forward with regard to the meeting of the British Medical Association in Aberdeen from July 24th to August 1st. The President's address will be delivered on Tuesday, July 28th. Sir Alexander Ogston, the distinguished surgeon, who is so closely associated with the University of Aberdeen, is President-elect. Sixteen sections are to be constituted. In nine cases a Scottish medical man of high standing has been appointed president, while many Aberdeen practitioners are among the vice-presidents and honorary secretaries.

*Turner Memorial Hospital, Keith: Installation of X Rays.*

During the year 107 patients were treated at the Turner Memorial Hospital, Keith. The income for the year was £606 1*s.* 2*d.*, and the expenditure £687 1*s.* 7*d.* An X ray apparatus was presented during the year to the institution.

Feb. 3rd.

## IRELAND.

*Sanatorium Benefit in Dublin.*

THE sanatorium benefit work of the Dublin County Borough Insurance Committee has come almost to a standstill, owing in part to the lethargy of the corporation, and in part to the difficulty of obtaining money from the Treasury. At the last meeting of the committee it was reported that there were 62 patients on the list for whom no accommodation could be found. It is now about ten months since the corporation and the Insurance Committee signified their assent to a scheme put forward by a joint committee of the two bodies for the establishment of a general tuberculosis campaign to be carried on by the corporation. Under this scheme the corporation was to provide sanatorium treatment and other institutional treatment for tuberculous patients nominated by the Insurance Committee, and to undertake domiciliary treatment for such patients as the Insurance Committee did not deem necessary to send to an institution. In return the Insurance Committee was to pay to the corporation a sum of 1*s.* 2*d.* for each insured person in the area of the county borough. Up to the present little attempt has been made by the corporation to carry out this agreement or to complete the contract with the Insurance Committee. The corporation demanded that it should have the right of determining both the nature and the duration of the treatment to be given to the patients nominated by the Insurance Committee. The Insurance Committee wished to reserve this right, and was supported by the Insurance Commissioners. The Insurance Committee asked further that in the constitution of the Tuberculosis Committee of the corporation it should be permitted to nominate 25 per cent. of the members. These points were agreed on at a conference between the Insurance Committee and the Provisional Tuberculosis Committee two months ago. The corporation, however, when it met three weeks ago to elect a permanent Tuberculosis Committee, took the extraordinary step of constituting all the members of the corporation members of the Tuberculosis Committee, with permission to add three persons nominated by the Insurance Committee. There are 80 members of the corporation, and one can hardly imagine a more unwieldy or unworkable committee. To add to the difficulty of administering sanatorium benefit, all the sanatoriums in Ireland are full.

*A State Medical Service.*

On Jan. 26th, at the annual public meeting of the Belfast Medical Students' Association, the President, Dr. T. S. S. Holmes, gave an opening address, in which he sketched the origin and growth of the association, and then called upon Professor Benjamin Moore, F.R.S. (Liverpool), to give a lecture upon the Scientific Case for a State Medical Service. Professor Moore then delivered an interesting *résumé* of the views of those who, like himself, believe a State Medical Service to be the cure of all the ills that flesh and the State are heir to. The address was full of idealism and of imagination, but was wanting, so the audience thought, in that knowledge of human nature and of medical practice which can only be obtained by those who have had personal experience in dealing with sick people. The address was commented on by Sir Otto Jaffe, J.P., Dr. John Campbell, Dr. A. G. Robb, Dr. John Rusk, and Sir John Byers.

*The Belfast Municipal Abattoir.*

The town of Belfast is to be congratulated on possessing a modern and model public abattoir,[1] and further measures should, if properly supported by the public, put an end to the abomination of private slaughter-houses. That an abattoir of any sort has at last come into existence is in a large measure due to the energy of Councillor Dr. H. O'Neill. There has been, it is true, much delay in what has been done, but the possibility must be admitted that this delay was useful in improving the original plans, and now Belfast can boast of one of the finest abattoirs in the British Isles. Very many years ago Dr. O'Neill became prominent as an agitator in favour of pure food. He joined the Belfast corporation so as to lead popular sentiment in this matter in accordance with scientific teaching. In 1898 a deputation of the corporation was sent to examine and report upon the principal abattoirs in England and on the continent. The result was the determination to imitate the Berlin abattoir, where some 1,000,000 animals are slaughtered annually, while provision is also made for a much

[1] THE LANCET, Sept. 20th, 1913, p. 895.

larger number in the event of a sudden army mobilisation. For its cattle market, adjoining the slaughter-houses, and the treatment, the washing and disinfection of the railway trucks, the arrangements at Berlin are admirable. But for the buildings where the actual slaughtering takes place, the public abattoirs of Zürich or Basle would have better served as models than Berlin. The latter are more modern. On the other hand, there is much to be said in favour of the efforts made at Belfast to follow the suggestions of the Admiralty Committee on Humane Slaughtering. The lairage is by the side of the slaughter-hall, and the latter is divided by high partitions like the stalls of a stable. The dividing walls prevent the animals seeing the slaughtering going on beside them. In these stalls the animals can be killed one at a time, and the room allotted to each cleaned before another animal is admitted. For the public the greatest advantage is the stamping of all the meat before it is offered for sale. Carcasses of animals slaughtered within the Belfast abattoir bear an oval stamp to that effect. Carcasses from outside but brought to the Meat Inspection Depôt and examined by the meat inspectors of the borough bear a round stamp. It now rests with the public to abolish private slaughter-houses by refusing to buy meat that does not bear the stamp of the public abattoir. Dr. O'Neill, in receiving congratulations on the outcome of his energetic work, which will be found described with many pictures and other matter, scientific and autobiographical, in the latest issue of his fitful periodical, the *Belfast Health Journal*.

Feb. 3rd.

## PARIS.

### *The Care of Lying-in Women.*

THE Minister for Internal Affairs, in view of the disquieting infant mortality, has requested the Académie de Médecine to draw up instructions and distribute them among those lying-in women entitled to the maternity benefit, to which I referred four weeks ago. The drawing up of these instructions, which must be couched in clear and easily understood language, and must include all those points persistent neglect of which will forfeit the benefit, was committed to Professor Pinard, who has now presented them to the Academy. They prescribe careful medical supervision of the woman from the eighth month. The benefit will be granted only on a medical certificate mentioning the expected date of labour. After the confinement it is ordered that the mother must keep her bed for ten days, suckle her child, abstain from alcoholic drinks and fatiguing household labour, and particularly from the use of the sewing machine. She must daily give the necessary attention to the child's entire body, particularly the eyes; she must not lay it on its back, but alternately on one side or the other; the breast must be given every two hours; and the medical man must be summoned on the appearance of the least trouble. Persistent disregard of these instructions in spite of the advice of the medical man must be reported to the mayor, who will stop the benefit.

### *The Delivery of Drugs to Medical Men from Wholesale Drug Houses.*

A strict application of the law prohibiting the delivery of drugs in medicinal doses by other than pharmacists has been made recently in the courts. Wholesale drug merchants are not required by law to hold a pharmacist's diploma. This law produces some curious results. For instance, the public cannot procure a centigramme of morphia except from a pharmacist, and then only on production of a medical man's prescription; while a mere employee of a commercial firm can obtain a kilogramme of the drug without difficulty from a wholesale drug house, and the same with poisons in general. An exception is cyanide of potassium. Up to the present it has been common for medical men to obtain direct from wholesale druggists for their personal use commercialised pharmaceutical products. A drug house which has recently been prosecuted freely delivered, at a lower price than the retail chemists, ampoules containing a solution of morphia for hypodermic injections to any medical man demanding them on his own prescription for his personal use. In the present suit it was not the doctor himself who obtained the drug, but his wife, an inveterate morphinomaniac, who imitated his signature to a prescription and sent her maid to obtain the ampoules with it. The medical man, notwithstanding that he had warned all the local chemists not to supply her, saw his wife's condition go from bad to worse, until a long and expensive treatment in a special *maison de santé* became necessary. Having discovered how his wife had obtained her supplies, he brought an action against the drug firm, and asked damages for the expense his wife's illness caused him. The court mulcted the drug firm in a fine of 300 francs, on the ground that wholesale drug houses are prohibited from selling pharmaceutical products at all save by wholesale, and then only to industrial firms, chemists, and pharmacists, not to any others, even though medical men.

### *The Water of Lunéville.*

The town of Lunéville has been receiving for a long time only impure water, and typhoid fever has been endemic in a disquieting degree among both the civil and the military population. This has increased materially since the new law reinforcing the garrisons in the east of France. The municipality therefore determined on a complete change in its water-supply. An important source was found, furnishing one-third of the total supply of drinking water. The rest had to be taken from the river Meurthe; but as its water is frequently impure, it was decided first to filter it in sand-beds and then to sterilise it with ozone. The company undertaking the work substituted sterilisation with the ultra-violet rays by means of the Westinghouse apparatus, which was considered to give the most perfect results. But after a year's working of this apparatus typhoid fever still remained *in statu quo* at Lunéville. The military authorities then took up the matter and discovered a singular device. Underground a huge vessel was found containing a solution of sodium hypochlorite, which trickled drop by drop into the water main. This discovery caused great excitement. The directors of the company in defence affirm that their contract called on them to sterilise only 8000 cubic metres of water daily, of which the greater part was to come from springs. These springs having furnished less water than was expected, a much larger proportion of water had to be derived from the polluted source of the river. Further, the consumption of the water by the population has increased to an entirely unforeseen degree, first by the increase in the strength of the garrison, then by the installation of drainage, and finally by the winter

frosts, which have made it necessary to leave taps permanently running to prevent the pipes freezing. In these circumstances they reinforced the method of sterilisation with sodium hypochlorite, which has been praised by M. Roux himself as a useful measure in the event of an epidemic coinciding with a diminution in the supply from springs. The administration is now investigating the foundation for these contentions, but the population of Lunéville excitedly proclaims that it is being poisoned and calls for a prosecution. It is consoling, however, that typhoid fever has remained throughout this time at Lunéville at a moderately low mark.

*Reception to Professor Ehrlich.*

Professor Ehrlich, who has been on a visit to Paris, was entertained on Feb. 2nd at a brilliant reception given in his honour at the Broca Hospital.

Feb. 2nd.

## BERLIN.

*Radium and Mesothorium in the Treatment of Cancer.*

THE radium and mesothorium treatment of cancer was lately discussed during three meetings of the Berlin Medical Society by a great number of speakers, some of whom had come from other cities to take part in the proceedings. The subject was introduced by Professor Bumm, who described the effect of the rays on growths of the uterus. He said that these growths became smaller and finally disappeared altogether; ulcers also became cicatrised, and on microscopical examination only some degenerated remnants of cancer cells were found. For complete healing, however, not only the growth itself, but also the foci in the neighbourhood and any infiltrated glands must be destroyed; but this was difficult to accomplish without harm to the normal tissue. When large quantities of the radio-active substance were employed, and the exposure was continued too long, the scar which was originally produced by the treatment began to become fibrous and to lose its elasticity; in progressive cases hyaline degeneration, and sometimes even necrosis, occurred. In the cervix uteri, the vagina, and the rectum there might be thickening of the tissues, which was sometimes like a relapse, the sequel being atresia or stenosis, and occasionally perforation or fistula. It was the action of the secondary rays issuing from the protective lead filter which was especially injurious, and this action might continue to occur even when the secondary rays were weakened by the interposition of caoutchouc. From anatomical specimens it became obvious that the curative effect of the rays extended to a depth of 4 centimetres. Hitherto out of 108 cases 15 showed a relapse. Of the oldest cases 10 remained free from relapse. In elderly women the effect was better than in younger ones. Professor Bumm warned his hearers against the employment of large doses of 300 milligrammes, because they produce necrosis, pyrexia, and sometimes even severe anæmia. He had used doses varying from 50 to 100 milligrammes at long intervals, so that the connective tissue had time to recover. The filter used by him consisted of aluminium and brass, enclosed in a capsule of horn, whereby there was a space between the radium and the tissue. According to his experience deep-acting Roentgen rays were at least equal to radium. In 10 cases in which an operation was not possible the application of Roentgen rays produced a marvellous improvement. He was of opinion that if the rays could be made active at a depth of three more centimetres the majority of patients suffering from cancer would recover under that treatment. Professor Lazarus said that, in his opinion, small doses of the radio-active substance produced a quicker growing of the tumour; the first dose should therefore be one of 150 milligrammes. The best way of avoiding any injurious action on the mucosa was to bring the source of the rays into the interior of the growth by the method of radio-puncture devised by him. Wherever possible surgical treatment should be resorted to, and radiotherapy should be used only as a preliminary and as a part of the after-treatment. Dr. Seuffert, of Munich, stated that injurious effects of radiotherapy were no longer seen in Professor Döderlein's clinic, since the lead filter had been abandoned and smaller doses of the radio-active substance employed. Dr. Nagelschmidt said that in the recoveries obtained up to the present time the growths had always been superficial and never deep-seated. Professor Gauss, of Freiburg, said that the scepticism which had followed upon the original enthusiasm was caused by faulty methods of procedure. The doses employed by some surgeons were much too small; he usually took 500 milligrammes as the dose for his exposures. A deep action was produced by rotating filters. In a summary of the results obtained in the University Clinic at Freiburg Professor Gauss said that 250 cases of cancer were treated, the first series including absolutely desperate cases, of which 61 have died, the remainder having improved to the extent that the hæmorrhage, fœtor, and pain had abated. The second series comprised 26 cases, which were not operable, although the disease was limited. Of this group 5 have died, the remainder having been free from symptoms for a period varying from six to nine months. The third series included 9 operable cases which were not operated upon, but were treated by radium exclusively. They had apparently recovered, but will be exposed to Roentgen rays for the next three years at intervals. The fourth group consisted of cases in which the rays have been applied as a prophylactic after a radical operation. Of 21 cases in which exposures to the rays had been made regularly 20 were still alive, and 1 had gone away and has since given no report of himself. Professor Bier said that a similar enthusiasm prevailed ten years ago, when it was believed that cancer of the lips could be cured by Roentgen rays and when cases were shown in which the growth had disappeared, but unfortunately all the alleged cases of recovery showed a relapse after a certain time, and the relapse seemed to be more malignant than the original disease. He warned his hearers against employing radium in operable cases, and recommended it only for the treatment of relapses after operations and for the purpose of avoiding relapses. Professor Bumm, in closing the discussion, said that the question whether a case should be operated upon or treated by rays had not yet been settled. It must be borne in mind that the mortality of operations was still rather great. The action of the rays could not be compared with that of a common thermo-cautery, because they had a direct influence on the cancer cells. If it should become possible to extend the action of the radium and mesothorium some

centimetres further into the deep-seated tissues we should have accomplished what hitherto could be obtained only by operation.

Feb. 2nd.

## CANADA.

### *Ontario Boundary Waters.*

THE Canadian section of the International Waterways Commission have just made public the findings of the experts appointed to determine the extent of sewage pollution of the boundary waters between the United States and the province of Ontario. The chief point brought home by these experts is that every municipality along the Great Lakes and their connecting streams that uses untreated water for domestic purposes constitutes a menace to public health. In many instances the method of purification and sanitation were found to be unsatisfactory. At the lower end of Lake Huron the water would be practically pure were it not for steamboat pollution; and the concentration of boat traffic in the river St. Clair gave a decided increase to the bacteria count. Below this, at Windsor and Walkerville, the intake pipes are in dangerous locations due to the pollution of the Detroit river water. In these towns, in spite of chlorination, the typhoid rates remain too high. The western end of Lake Erie is grossly polluted, whilst towards Buffalo, U.S.A., at the eastern end, the main contamination comes from steamboats. The Niagara river is polluted along both shores, and where the river enters Lake Ontario the pollution may drift north, east, or west. Lake Ontario is sometimes practically sterile, but becomes seriously contaminated at certain seasons. In Toronto, so far as the water is concerned, the difficulties have been met in part by filtration and chlorination, and additional mechanical filtration plant will be established as soon as the experts agree upon the site, but the sewage question is said still to remain imminent.

### *Manitoba Medical College.*

This institution is now holding its thirty-first session with 61 in the first year and a total in all years of 192 students. This is the largest number yet registered, due no doubt to the extension of the college and doubling of its original capacity. A new building provides laboratories for practical pathology and practical bacteriology; there are an enlarged pathological museum, a pathological work-room, and two extra lecture rooms. Considerable space has also been added in the dissecting room. Some additions have been made to the teaching staff and new appointments made. Dr. O. S. Waugh and Dr. George Stephens have been appointed demonstrators in pathology and Dr. D. E. McKenty demonstrator in histology. Dr. Alexander Gibson, formerly demonstrator of anatomy in the University of Edinburgh, has been appointed professor of anatomy in the Manitoba Medical College, to take the place of Dr. E. J. Evatt, who has received a similar appointment at the Royal College of Surgeons in Ireland, vacated through Dr. A. C. Geddes having accepted the professorship of anatomy in McGill University, Montreal.

### *The American College of Surgeons.*

In the Canadian list of the American College of Surgeons appear three names from the province of Alberta; from Manitoba, one outside Winnipeg. In the whole province of Ontario outside of Toronto there are only three. From the province of Quebec, outside Montreal, there is not one, and not a French surgeon from Quebec. Nova Scotia supplies one; Prince Edward's Island one. The question is being asked, Why cannot Canada have a College of Surgeons of its own?

### *Appointments.*

Colonel George Sterling Ryerson, M.D., has been elected President of the Canadian Red Cross Society. Dr. Sepherin Boucher, Montreal, has been appointed medical officer of health of that city. Dr. Paquin has been appointed medical officer of health of Quebec City.

### *Obituary.*

Dr. John Caven, of Toronto, was the eldest son of the late Principal Caven, for many years President of Knox College in Toronto. He was born in Ontario in 1860, and was for several years professor of pathology in the medical department of the University of Toronto and pathologist to the Toronto General Hospital. Resigning these positions several years ago, he became a consulting specialist of wide distinction throughout the province of Ontario.—At the great age of 98 years Dr. Arthur Fisher, father of the Hon. Sidney Fisher, for many years Minister of Agriculture for Canada, died a few weeks ago in Montreal. He saw Montreal grow from a town of 15,000 to a city of 600,000. The late Dr. Fisher was born in Montreal and educated there and in Edinburgh, Scotland. He retired from practice 50 years ago.

Toronto, Jan. 19th.

## AUSTRALIA.

### *Melbourne Medical School.*

THE Melbourne University Medical School will celebrate its jubilee on April 30th and May 1st and 2nd. A strong executive committee has been formed to arrange the necessary functions, which will include a dinner, laboratory demonstrations, lectures, and general meetings. In order to give a permanent memorial to the occasion it has been decided to present the University with a portrait in oils of Professor H. B. Allen, the Dean of the Faculty, who has been continuously at work in the medical school for more than 30 years, first as professor of anatomy and pathology and of late years of pathology alone. A second scheme is being organised to provide a fund for clinical research at the three medical schools recognised by the University.

### *Large Charitable Bequest.*

The will of the late Sir S. Gillott, who was a well-known Victorian public man, has been proved at upwards of £200,000. A life interest is bequeathed to Lady Gillott, and after her death the estate is to be divided between four leading Melbourne hospitals in differing proportion.

### *Prosecution of Medical Man.*

Mr. E. G. Leger Erson was again proceeded against in the criminal court for alleged offences against the Federal Maternity Bonus Act. The present charges arose out of others upon which two women were convicted and sentenced, but Mr. Erson was acquitted. He acknowledged having signed certificate forms in blank, but denied that he had any fraudulent intent. After the second hearing, at which one of the women previously convicted was called as a Crown witness, the jury found that he had signed blank forms, but they acquitted him of knowledge of how these forms had been used. Mr. Justice Cussen remanded the accused till

Feb. 17th, as he was not certain whether any penalty existed for the offence. Bail was allowed in nominal securities.

*Friendly Societies in Victoria.*

The Government statist for Victoria reports that the growth of Friendly Society work has been very marked during the past ten years. There are upwards of 150,000 members—this is allowing for dependents. Dr. W. R. Boyd, speaking at a recent conference, said there were about 600,000 persons eligible for medical attendance by lodge doctors, which is about half the total population of the State.

*Small-pox in Sydney.*

At the instance of a conference of State health officers in Sydney the quarantine was lifted from Sydney and suburbs early in December. Certain formalities remain still to be imposed on inter-State travellers. The number of fresh cases occurring in Sydney had been for some time reduced to one or two daily, but on one day after the removal of quarantine a family of nine were discovered all suffering from the disease. The longest interval without a fresh case has been six days, but in the Christmas week this interval was broken by a new case. No spread of the disease beyond Sydney has occurred. The R.M.S. *Malwa* arrived early in December with the report of a fatal case of small-pox between Colombo and Fremantle. The ship's company was quarantined in Melbourne, but no fresh case occurred, and all have been released.

*The Battle of the Clubs.*

The disagreement between the medical profession of New South Wales and the Friendly Societies shows no signs of clearing up, and at the present moment the tension is acute. In Victoria negotiations are still proceeding between the lodge officials and the branch council of the British Medical Association. In Queensland also the medical practitioners are united in asking for better terms. In the other States the Friendly Societies are scarcely powerful enough to venture upon dictatorial terms.

Jan. 1st.

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LITERARY INTELLIGENCE.—Messrs. W. Hodge and Co. announce for early publication a new volume of their series of Notable English Trials, dealing with the trial of the Seddons, and edited by Mr. Filson Young.—Messrs. Simpkin, Marshall, and Co. announce a work appealing to similar interest, entitled "Noted Murder Mysteries," in which Mr. Philip Curtin narrates the stories, among others, of the Bravo case and the crime of the Brothers Peltzer.

DONATIONS AND BEQUESTS.—By the will of Mrs. Marianne Costar, of Redhill, St. Thomas's Hospital and Guy's Hospital will each receive £5000, and Charing Cross Hospital, the London Hospital, the Great Northern Central Hospital, the Middlesex Hospital, the Metropolitan Hospital, Kingsland-road, King's College Hospital, St. Mary's Hospital, University College Hospital, the Westminster Hospital, the Royal Free Hospital, the West London Hospital, and the Reigate Cottage Hospital £2000 each.—The late Mr. Edward Trounson, of Redruth, has bequeathed £1000 to the West Cornwall Miners' and Women's Hospital.—Under the will of the late Mr. James F. Power, of Eccles, St. Mary's Hospitals and the Manchester and Salford Lying-in Hospital and Dispensary will each receive £2000, and the Manchester Royal Infirmary and Dispensary will receive £1000.—Mr. W. J. Tatem, of Cardiff, has contributed 1000 guineas to endow a cot as a memorial of his mother at the Hamadryad Seamen's Hospital, Cardiff.—Mrs. Greenough and her son, Mr. T. Greenough, of Beechwood, have presented to Leigh Infirmary, in memory of the late Alderman Greenough, a block of buildings for a complete installation of X ray apparatus.

# Correspondence.

"Audi alteram partem."

## THE MEDICAL REGISTER.

*To the Editor of* THE LANCET.

SIR,—On Jan. 29th a circular of inquiry as to the accuracy of his address on the Medical Register was sent to every medical practitioner between the letters A and L, both inclusive. Any practitioner who does not receive one of these circulars in course of post should communicate with me immediately, in order that there may be no risk of his name being taken off the Register because he cannot be communicated with.

I am, Sir, yours faithfully,
NORMAN C. KING, Registrar.

General Council of Medical Education and Registration of the United Kingdom, 299, Oxford-street, London, W., Feb. 2nd, 1914.

*** We would impress upon our readers the importance of complying with the Registrar's request. The Register can only be maintained in its present high state of accuracy by the coöperation of the medical profession.—ED. L.

## THE TREATMENT OF INCIPIENT AND UNCONFIRMED INSANITY.

*To the Editor of* THE LANCET.

SIR,—The recent discussion on the treatment of incipient and unconfirmed insanity, opened by Dr. R. Armstrong-Jones at a meeting of the Medico-Legal Society, on Nov. 25th, 1913, involves a question of so much importance that I venture to ask a small portion of your valuable space for its consideration.

I have been interested in this subject for many years, and as the outcome of a paper which I read before the British Medical Association at Carlisle in 1896, Lord Halsbury, then Lord Chancellor, introduced into two successive Lunacy Bills clauses providing for the treatment of unconfirmed insanity without certification for six months. These Bills did not pass, and the law remains unchanged.

The approaching completion of Dr. H. Maudsley's mental hospital demands that some alteration should be made in the existing lunacy law, if that institution is to fulfil the benevolent intention of its generous founder. Patients may be admitted there as voluntary boarders as the law now stands, but there are other incipient cases who will not voluntarily submit to detention for treatment, and for these the clauses adopted by Lord Halsbury would be necessary. If, however, these or similar clauses become law, they will extend the power of treating incipient insanity for six months without certificates to other institutions, homes, and persons, and it will be necessary to limit this power of treatment to such institutions, homes, &c., as can offer proof of being properly organised and under persons experienced in the treatment of mental disorders.

The Board of Control, if this change is made, should grant a licence only to persons who had given proof of such experience as satisfied it; in institutions or homes in regard to whose fitness the Board was equally satisfied. The places of treatment and the patients should be at all times liable to inspection by the official representatives of the Board, and reports of the progress and termination of the case should also be furnished to it.

The early stage of mental disorder is by far the most important period in the disease; skilled treatment may often arrest, while unskilled treatment, however well intentioned, may lead to lasting or even permanent mental wreckage. Certification is so much dreaded (whether reasonably or not) that all kinds of procedures are now adopted to avoid it. To save the rest of the family from the slur of having an insane relative great risks are run in the treatment of the patient, and great expenses incurred. If these patients could be legally treated for a time without certification the relatives would naturally desire to send them to the hospitals, licensed homes, &c., in which they could have the best and most experienced treatment, and in this way much of the prejudice against asylums would be overcome. The prejudice, indeed, is not so much against the asylum (although this is considerable) as against the certification which asylum care necessitates in all but the voluntary boarder cases. The success of the voluntary boarder system is an evidence of this so far as the patients are concerned, and the patient's friends would often be very thankful to use the asylum if the certification could be avoided.

If, therefore, the law in regard to certification is relaxed this should be accompanied by redoubled stringency and vigilance against the treatment which is now so largely carried on by unskilled persons in unsuitable surroundings.

I am, Sir, yours faithfully,

HENRY RAYNER, M.D. Aberd.

Queen Anne-street, W., Feb. 4th, 1914.

## HOSPITAL STATISTICS.

*To the Editor of* THE LANCET.

SIR,—Your leading article on Hospital Statistics in THE LANCET of Jan. 31st has earned the gratitude of all who are interested in the subject. There are, indeed, many reasons why this matter should receive more attention than has up to now been devoted to it. In the first place, those who, like myself, have analysed clinical or anthropometric data derived from hospital records have been unable to determine the precise significance attaching to their results, because, while conscious of the unrepresentative character of a "general hospital population," they have never had sufficient data to render its peculiarities distinct, and no corresponding materials with regard to the non-hospital population have been available. From statements which have appeared in the press with reference to the Government scheme of medical research under the Insurance Act, it would appear probable that adequate medico-statistical data respecting the non-hospital working and lower middle-class population will be made available. The time is therefore opportune for a corresponding study of the "general hospital population." In the second place, cursory inspection of the Registrar-General's last annual report is sufficient to convince anyone not already convinced that the morbidity experience of the hospitals covers in the case of more than one disease a considerable portion of the total morbidity experience of the metropolis. This information ought surely to be made available in the interest of the public health service. I am under no illusions as to the difficulties of standardising and centralising our hospital data. It is a task which will demand the coöperation of clinicians, statisticians, and hospital administrators, but I do submit that it is a task well worth accomplishing, and I trust that now you, Sir, have raised the question it will not be allowed to drop.

I am, Sir, yours faithfully,

M. GREENWOOD, jun.

Lister Institute of Preventive Medicine, Statistical Laboratory, Feb. 2nd, 1914.

## THE DUCTLESS GLANDS.

*To the Editor of* THE LANCET.

SIR,—Owing to some oversight I was unaware of your allusions in the Annus Medicus 1913 to my Arris and Gale Lectures and the discussion at the Royal Society of Medicine on the Relations of the Internal Secretions to the Female Characteristics and Functions. The remarks in your summary appear to me to be a fair, if cautious, statement of the position. But I think that Professor Swale Vincent's letter in your issue of Jan. 31st over-emphasises certain remarks in your article, and calls for some reply from me.

I fear I cannot agree either with yourselves or Professor Vincent that the facts indicating—I might say proving—that definite correlations exist between the organs of internal secretion are few; or, in the words of Professor Vincent, that "the facts at our disposal have so far not been sufficient to warrant us in drawing any very definite conclusions as to the interrelations between the various organs furnishing an internal secretion." This statement is much stronger than that expressed in your article. In any case both are entirely misleading, if not absolutely wrong.

In my lectures and introductory paper at the discussion at the Royal Society of Medicine I stated nothing that I did not prove by actual colour photomicrographs illustrating the changes which are regularly produced in the other endocrinous organs by removal of one of their number. Owing to the cost of reproduction these coloured pictures have not yet been published. In the special experiments of thymus excision and partial removal of the pituitary I quoted the findings of Noel Paton and Harvey Cushing; but I could not, as I said, vouch for their results. Indeed, in some respects their conclusions have not been fully demonstrated so far as I know.

Professor Vincent alludes to my writings and those of "other clinicians" as though my work was in some way different from his. This may be so, for I am not aware that he has done much experimental work on this aspect of the subject; but it does not necessarily follow that my results are wrong. His objections to my conclusions are founded on fancy, my arguments are based on ascertained facts. I think the final decision may safely be left to the future. In his first paragraph Professor Vincent practically denies that there is any evidence in support of my statements, and asserts that my complaint of Biedl for not so correlating the functions of the internal secretions in his recent work is unjustifiable. Yet in the second paragraph Professor Vincent announces that in a future edition of his book he is going to do exactly what I have done! This seems to be an unusually unscientific and unreasonable mental attitude. What is right for Professor Vincent in 1915 cannot be far wrong for me in 1913! Biedl himself all through his book gives a vast amount of evidence of the correlations that exist; and my complaint against

him was, not that he did not support the doctrine, but that nowhere did he attempt to sort out all the wealth of detail collected, and classify it according to the specialised functions. My attempt to do so in regard to the female genital functions is the first, but I am sure it will not be the last, attempt of the sort.

In conclusion, I would like myself to state how cordially I agree with much that has been said and written about many wild generalisations that have been made in papers which give no evidence of first-hand knowledge; and also to point out that the pure physiologist will not go far in the solution of the problems connected with the internal secretions until he takes more heed of the clinical and pathological aspects of the subject.

I am, Sir, yours faithfully,

Liverpool, Feb. 2nd, 1914. W. BLAIR BELL.

## DOSAGE AND THE METRIC SYSTEM.

*To the Editor of* THE LANCET.

SIR,—Your readers interested in the application of the metric system to medicine and pharmacy will note with much satisfaction Mr. G. E. M. Johnson's announcement in your last issue (p. 357) that the Decimal Association has been assured by the General Medical Council of the adoption of the metric system in the dosage of the forthcoming edition of the British Pharmacopœia. Possibly this announcement gives to my proposal in your issue of Jan. 24th (p. 231) a somewhat belated appearance. Yet, as qualifying this criticism, I may plead that the proposal was originally advanced in 1903,[1] and that, in so far as I knew, it had attracted no attention. In these circumstances a ten years' interval may perhaps excuse its repetition.

I am, Sir, yours faithfully,

Harley-street, W., Feb. 2nd, 1914. C. O. HAWTHORNE.

## GOATS' MILK.

*To the Editor of* THE LANCET.

SIR,—The correspondence about milk ought not to close without a word about goat's milk.

Goats practically never have tubercle, therefore their milk can be given without pasteurising; further, it can be obtained fresh and clean. I once caught in a test-tube milk from the teat of a goat being milked by a boy; the test-tube was placed in an incubator and remained sterile. With respect to cost you will find an estimate in the British Goat Society's Monthly Circular; it figures out for the keep only of the goats at 1·4*d.* per quart of milk, but goat's milk is not an article of commerce, and it is necessary for the child's father to take some trouble in the matter, which, if the object is explained to him and he lives in the country, he will be willing to do. Goats are small and cleanly animals, and can be kept in health even in the centre of a large town; their milk is said to be better for infants than cow's milk because the curd is finer.

I am, Sir, yours faithfully,

Devonshire-place, W., Jan. 31st, 1914. WALTER EDMUNDS.

*** We have been compelled by pressure on our correspondence columns to hold further letters on the subject of milk sterilisation over until next week.—ED. L.

[1] Polyclinic Journal, April, 1903, p. 138.

## TREATMENT OF GASTRIC AND DUODENAL PERFORATION.

*To the Editor of* THE LANCET.

SIR,—The tamponade method of Mr. E. M. Corner is one that most surgeons have been obliged to content themselves with occasionally in desperate cases and when the perforation is found to be inaccessible to ready suture. That it can be a means of saving life as a substitute for laborious suturing there can be no doubt, and Mr. Corner is to be congratulated on his effort to bring the method prominently before surgeons.

In the discussion on this subject I did not notice any mention of a valuable auxiliary to any method of dealing with abdominal catastrophes of this class—that is, cases of acute peritoneal sepsis. I refer to the injection of camphor and olive oil into the cavity. I have been using this for about 18 months, and have formed the opinion that it is of real value; in fact, as regards treatment alone I am inclined to place it alongside of the Murphy proctoclysis and the Fowler position. The procedure is simple and rapid; for an adult 100 grammes of a 1 per cent. solution of camphor in olive oil is poured into the peritoneal cavity as soon as the perforation is found and secured by whatever method is deemed suitable, the cavity having been previously cleansed by mopping out, not flushing. The method is equally effective and equally useful in cases of fulminating appendicitis and such-like causes of diffuse septic peritonitis. A point of practical importance is that if silkworm gut sutures are used for the abdominal and suprapubic drainage wounds, they may either be placed before the oil is used or a pair of cotton gloves should be put over the rubber ones as the oiled silkworm gut is slippery to handle.

The theoretical proposition is that the camphor acts quickly as a cardiac stimulant, and that the oil is taken up rapidly by the lymphatics and temporarily blocks them, thus diminishing the absorption of toxins. If oil has any value in preventing the formation of adhesions, then this is an additional incentive to use the method. As there appears to be some difficulty in procuring the mixture ready sterilised, I may say that Messrs. Burroughs and Wellcome have prepared for me flasks in two sizes, 50 grammes for children and 100 grammes for adults. For those who desire a full account of this treatment I would refer them to an excellent article in *Lyon Chirurgical*, December, 1910—January, 1911, by M. Vignard and M. Arnaud. I am, Sir, yours faithfully,

Newport, Mon., Jan. 28th, 1914. W. J. GREER.

## ASEPTIC URETERAL CATHETERISATION.

*To the Editor of* THE LANCET.

SIR,—In THE LANCET of Jan. 24th Mr. R. J. Willan describes his ingenious appliance for performing aseptic ureteral catheterisation. The same ideal can be obtained by means of a far simpler appliance which I adopted some time ago. It consists of a tube made of fine linen or calico, open at both ends, about half an inch in diameter and slightly longer than the ureteric catheter. The tube is sterilised by boiling, and the end of the previously sterilised catheter is inserted by means of sterile forceps in the end of the tube. The catheter is then worked along the tube exactly as a housewife works a bodkin along a seam. As soon as

the tip of the catheter appears at the far end of the tube it is inserted into the cystoscope and its further progress continued by manipulation through the linen tube. As the catheter passes into the cystoscope and eventually up the ureter the linen tube gathers up in folds near the cystoscope and requires to be straightened out occasionally by pulling on the distal end of the tube. This is easily done without disturbing the catheter.

The whole operation can be performed without touching the catheter with the fingers. The appliance is simple, can be made at home, and costs practically *nil*.—I am, Sir, yours faithfully,

P. MAYNARD HEATH.

Upper Wimpole-street, Jan. 30th, 1914.

## THE PATHOLOGY OF SYPHILIS.

*To the Editor of* THE LANCET.

SIR,—As our knowledge of syphilis is under critical survey at the present time, I would be grateful if you would allow me—a research worker into the pathology and prevention of the disease—to criticise some of the statements made in Dr. d'Este Emery's paper published in THE LANCET of Jan. 24th.

In that paper it is stated that we have now as good a knowledge of syphilis as of any other disease except malaria, and that the spirochæta pallida of Schaudinn is the actual *materies morbi*. Do we know all this? Does the spirochæte pass through the placenta? Does it fail to pass through a coarse filter? Perhaps we do not know as much as we think we know. The paper also contains the remark, which is difficult to accept without demur, "I must emphasise the *fact* that during the secondary stage of syphilis every drop of blood and every cell of the body becomes profoundly altered." Is there sufficient evidence in favour of this statement to warrant its publication as if it were a proven fact? Or again: "The fever which so frequently occurs about this time (secondary stage) is readily explicable when we remember that there are large numbers of spirochætes and large amounts of antibodies present in the body at the time." If the spirochætes are so numerous they are very difficult to find in such great numbers in the body. One wonders where they are hidden. Then the article opens with the declaration that syphilis was spread after the discovery of the Americas. What evidence is there of this? It has recently been found that rabbits suffer from a disease like syphilis, and guinea-pigs too. Did they migrate all over the world after the introduction of America to civilisation? Are there people still existing who believe the origin of syphilis to be due to Divine wrath on account of the sinful lust of soldiers during the Middle Ages? Did rabbits incur such celestial displeasure?

The following statement also appears to need explanation: "The fact that the organism exists as a spirochæte in the lesions in all phases of the disease, from the primary chancre and even from an earlier stage (Levaditi and Yamanouchi), to the last stage of tabes and general paralysis, that it can be cultivated for many generations, during which (except for a few occasional spherical bodies which are probably involution forms) it remains a spirochæte, shows that there is no necessity for assuming any other form in its life-history." Why? The crescent forms of the malaria parasites are found throughout that disease, even during the long waits; they always remain the same, yet nobody assumes them to be the only forms of malaria parasites. Besides, what are these involution forms of the parasite of syphilis? What is meant by the word "involution"? The dictionary says that "involution" means "involved," and that "involved" may mean "latent." Perhaps, then, there are latent or developmental forms of the parasite, and Dr. Emery has accidentally discovered their existence. But the phrase "involution form" seems to be used by some pathologists loosely; it merely means something they do not understand. It is possible that he has himself demonstrated the beginnings of a life-cycle of the parasite of syphilis which he himself is convinced does not exist.

The article bears mainly on the cure of syphilis. The prevention of the disease seems to be forgotten, anyhow it is not mentioned. Yet prevention is better than cure. The paper states definitely that we know a great deal about syphilis, but more about malaria. Nevertheless, its author does not suggest that we should gain by our experience with malaria. It has been found impossible to abolish malaria by curing it, and probably the same thing applies to syphilis. Malaria can be cured easily, yet general and enforced cure in a fever-stricken locality does not produce its abolition; Ismailia told this story well. Why, then, do we make such strides to emphasise the cure only of syphilis? We ought to try to prevent it, for the prevention of malaria is most successful—witness the Suez Canal, the Panama Canal, the Federated Malay States, and the others.

We must try to prevent syphilis, and the best way to do this is to find out the exact truth concerning the parasite which causes it. This can alone be done by remembering the difference between speculation and proof.

I am, Sir, yours faithfully,

Curzon-street, W., Jan. 25th, 1914. E. HALFORD ROSS.

## LISTERISM IN LONDON IN THE "SEVENTIES."

*To the Editor of* THE LANCET.

SIR,—In thoroughly supporting Dr. Hale White in THE LANCET of Jan. 24th one can do so as a Guy's man of the "seventies" without any hesitation. The reformation of the carbolic spray at Guy's Hospital under the leadership of Mr. Howse, as a surer step to cleanliness in surgery, has borne its fruit to the satisfaction of everyone. And the surrender of the old nurse to the modern hygienic type can be also chronicled during this decade at the same hospital, and this has led to vast strides in the science and art of surgey.

Like the aniline stain in microscopy, the carbolic spray was a means to an end; for while the former opened up the hidden microbe the latter trapped its inroads by the strategy of pure cleanliness. And whatever virtues were attributed to carbolic acid as a dressing for wounds, it was eventually changed for a more convenient protective type. Again, it was proved to be detrimental to the best interests of the growing cell, and thus it grew into disuse. It was not surprising, then, to find that even at Guy's Hospital there was an opponent to the carbolic spray when it was at its height of fashion. I remember that Mr. Thomas Bryant preferred iodine for the treatment of wounds and for general purposes of cleanliness, and iodine is again in modern use.

I have not read Dr. Wrench's book, but I am

sure all Guy's men of the "seventies" will fully endorse Dr. Hale White's remarks to the letter that Sir Henry Howse practised Listerism in the "seventies" *in toto*, and that the junior staff pulled together with him on the truthful lines of Listerism.

I am, Sir, yours faithfully,

Alton, Hants, Jan. 27th, 1914. JOHN FREDK. BRISCOE.

## A NATIONAL MEDICAL SERVICE.

*To the Editor of* THE LANCET.

SIR,—Mr. Charles A. Parker is a well-known advocate of a State or National Medical Service, and it is therefore useful that in the present discussion his views should be available. His letter in your issue of Jan. 31st, p. 357, is therefore opportune. A State Medical Service is still so much in the air and means so many different things to so many different people that if its virtues or vices are to be profitably discussed one is glad to be sure that one is dealing with the views of an orthodox exponent of an accepted scheme. I am inclined to believe with you, Sir, that in this discussion "the free choice of doctor is the matter upon which everything turns." At any rate, a great deal of Mr. Parker's defence of the State Service turns on "free choice," although he denies your statement as to its importance. Mr. Parker begins by suggesting that the fact that Poor-law patients have not been given "free choice" in the past is a ground for suspecting that the doctors' support of the public demand for "free choice" is not made in the interests of the patients, but for the selfish advantage of individual doctors. It is well known that this view of the professional attitude to this question is held by a small and extreme section of Socialists. This small band, with a Shavian distrust of all doctors, believe it is essential that the disabilities under which pauper patients suffer in the absence of free choice should be extended to every one who is not wealthy enough to make from his own resources provision for medical attendance.

I had not imagined that this view was shared by members of the medical profession, all of whom I thought recognised that their colleagues' widespread desire for free choice of doctor was due to a wish to give to the poor equality of opportunity with the rich in respect to a privilege which is highly valued, and never likely to be given up, by those in affluent circumstances. Of the medical men with whom I have discussed a State Medical Service the small number I have found sympathetic with the idea have explained their position by asserting that large numbers of the poor are too harassed by their poverty and indifferent to their own interest to exercise an effectual choice if offered them, and that as for the rest a sufficient though limited free choice might possibly be given in connexion with a State Service.

Neither of these arguments appeals to me. The indifference of large numbers of the poor to all questions relating to their personal health is deplorable, and the necessity of exercising an effective choice as to their medical attendants seems likely to be a valuable means of rousing them from it. But it is in connexion with the second statement regarding the possibility of offering a sufficient free choice in a State Service that I think we ought to have further enlightenment. It depends upon what constitutes a national service. It would, of course, be quite possible to regard the existing service under the Insurance Act with its panel system as a national service, and when this service is extended to all the dependents of the insured the name would not be inappropriate. For my part, I believe that upon such a basis with properly organised extensions and developments, a highly satisfactory system of preventive and curative medical treatment for the whole community, with free choice of doctor, could be set up. But I have always understood that it is an essential of a Socialistic scheme of State Medical Service that the general practitioners at any rate, if not also the consulting physicians and surgeons taking part in it, shall be whole-time officials paid fixed salaries. Above all things, I believe it is said by some State Service supporters "the doctor must be removed from the temptation of competing for patients."

In the last sentence of his letter to you Mr. Parker says, "It would be possible under a State Medical Service to extend the possibilities of 'free choice' to practically the whole population." This is putting the possibility very much higher than I have ever heard it put before by advocates of a whole-time service. It encourages me to hope that Mr. Parker is dissociating himself from those who insist on whole-time salaried officials as a *sine qua non* of State Service, and is prepared to throw the great weight of his influence in favour of the extension and perfection of the insurance service.

If I am to be disappointed in this hope and Mr. Parker still clings to a whole-time service, I feel sure he will be good enough to help us to understand his position better by giving your readers in detail the necessary arrangements for combining this system of appointment with effective free choice of doctor.—I am, Sir, yours faithfully

Harley-street, W., Jan. 31st, 1914. LAURISTON E. SHAW.

*To the Editor of* THE LANCET.

SIR,—The main object of Mr. C. A. Parker's letter in THE LANCET of Jan. 31st seems to be to depreciate the principle of "free choice of doctor." The attempt is not very successful, and although misleading analogies are introduced, which may perplex the unwary reader, the net result of his arguments will rather tend to confirm the general opinion both in the profession and public that "free choice of doctor" by the community generally is far and away the best relation that can exist between the medical practitioner and his patient.

But if "free choice" is best for the community generally, it does not follow that special medical services are always to be condemned. Special medical services may be also necessary under special circumstances. Mr. Parker asks why Poor-law patients should not be permitted "free choice" of their doctor. I can only refer him to the Report of the Minority of the Royal Commission on the Poor-laws, and if the reasons given there are insufficient I can offer him no better. It is a well-known aphorism that they who pay the piper have a right to call the tune, and a sound reason has yet to be given why they who desire medical treatment at some one else's cost should choose their own doctor. It would be quite as reasonable for the recipients of public relief generally to claim the right of choosing the particular variety they desire. So long as the quality is good they have no right of choice whatever, neither would it be good for the State they should have. The British Medical Association has always upheld the principle of "free choice of doctor," but the committee

appointed to consider the report of the last Royal Commission on the Poor-laws coupled with that right the not unimportant corollary that those choosing their doctor should pay themselves a portion of the cost.

Medical services dealing with special classes—e.g., the Poor-law, the army, navy, &c.—which require for State reasons conditions other than the requirement common to all medical attendance that the best professional skill shall be available, must necessarily make large inroads on the principle of "free choice," and it is only equitable that those who are denied the choice of a doctor should not be called upon to pay towards the cost of the medical service. But it is otherwise in the case of the community generally, who are compelled individually to pay towards the cost of their medical attendance, and no proper analogy can be drawn between a State medical service to attend the community and the State services existing at the present time.

I do not share Mr. Parker's opinion that the public has not been loud in favour of the right of "free choice of doctor." The public can only speak through its representatives, and on a memorable occasion during the passage of the National Insurance Act the unanimity of both the parties in the House of Commons on this subject affords a striking proof of what the public think. The individual members of Friendly Societies also are of the same opinion, as was shown by the small minority, according to Mr. Parker's figures, that were in favour of anything like a State service. The reason why the leaders of the Friendly Societies desire to control the panel doctor is on the score of cheapness. As under the old club system, if the medical attendance was cheap they did not trouble much as to its efficiency, so now the panel system would be popular enough if it cost less money. It is quite true that, as compared with ordinary private practice, the panel system has encroached largely on the principle of "free choice." Still, half a loaf is better than no bread, and if the profession is wise it will never support a system which must be the abnegation of all free choice, as any form of real State service must necessarily be.

Mr. Parker says: "It would be possible under a State Medical Service to extend the *possibilities* of a free choice to practically the whole population." What he means by this statement he perhaps knows, but few of his readers will be in that happy position. It would seem to most a much easier proposition to prove the *impossibilities* of free choice under any such system, so that it would be interesting if Mr. Parker would formulate some concrete scheme to manifest these "possibilities" to the intelligence of his professional brethren. I am, Sir, yours faithfully,

Hackney-road, N.E., Jan. 31st, 1914. MAJOR GREENWOOD.

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*To the Editor of* THE LANCET.

SIR,—Nomenclature is becoming very difficult in connexion with the National Insurance Act. The term "National Medical Service" is applied to the subject of a paper read last December before the South-West Essex Branch of the British Medical Association by Mr. A. Todd-White, and an explanatory footnote informs us that the term "national" is used in order to distinguish the author's scheme from all others published under the title "State Medical Service," which are "quite different." In spite of this claim to differ comparison may be made between Mr. Todd-White's views and those of Professor Benjamin Moore referred to in THE LANCET of April 22nd, 1911, p. 1090. Mr. Todd-White informs us that he has advocated for more than 12 years the formation of a Ministry of Public Health and has now taken a step further under the Insurance Act, being brought by it to the contemplation of a possible National Medical Service under a Minister of Public Health. He strongly advocates the better representation of the medical profession in Parliament, but does not make it quite clear how he would bring this about in these days of all-powerful and accurately organised political caucuses, even though the profession were willing to pay the election expenses of "at least 10 more" members. His proposals for the organisation of a national service are made in a somewhat sketchy form, but his paper may well be included in the bibliography of an important subject, and he makes a good point in urging the medical profession to consider its position with regard to a proposal for a National or State Service which may otherwise come upon it more or less unexpectedly from outside. I am, Sir, yours faithfully,

Feb. 2nd, 1914. E. A. A.

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## MEDICAL PRACTICE UNDER THE INSURANCE ACT.

*To the Editor of* THE LANCET.

SIR,—May I call attention to two curious mistakes made by the writer of this article in THE LANCET of Jan. 10th? Your correspondent says that the German sickness fund (*kasse*) "does not contribute to the maintenance of insured persons in the hospitals." This statement is singularly misleading, as your correspondent will allow if he consults the German Sickness Insurance Law, the annual reports issued by the German Government relative to the administration of the law, or the reports of any of the 20,000 or more sickness funds. In point of fact, these sickness funds paid in 1911 for the maintenance of insured persons in hospitals and other institutions no less than £3,167,000, or 4*s.* 2*d.* a head for all their 14,519,000 members. The other error which I would corect arises from a want of acquaintance with German local government. Your correspondent says: "It is the magistrate who decides what has to be done for those who are ill, are not insured, and cannot pay." Even if your correspondent were only confusing the English word "magistrate" and the German word *magistrat* (the name of the municipal executive), he would still be wrong, for the Poor-law is administered by a mixed deputation or commission of the local authority. May I call your correspondent's attention to a White Paper entitled "Medical Benefit under the German Sickness Insurance Legislation," published in 1913 at the price o 4½*d.*? In it he will find many facts bearing upon this subject.

I am, Sir, yours faithfully,

Jan. 31st, 1914. R. M.

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HUNTERIAN SOCIETY.—The next meeting of this society will be held at St. Bartholomew's Hospital (in the library) at 9 P.M. on Wednesday next, Feb. 11th, when the annual Hunterian Oration will be delivered by Dr. Arnold Chaplin, his subject being John Hunter and his Work, and the Past and Future of the Medical Profession. All members of the medical profession are invited to attend.

# THE NATIONAL INSURANCE ACT.

## THE NEW MEDICAL BENEFIT REGULATIONS.

THE National Health Insurance (Medical Benefit) Regulations (England), 1913, have been issued, and as they came into force nominally on Jan. 12th they have already taken the place of the Provisional Regulations issued in November, 1913. Regulations following upon provisional regulations at so short an interval were not expected to contain much that is new, and with one very important exception—viz., Regulation 44 (2), a separate reference to which is necessary—the differences between the Regulations and the Provisional Regulations call for little comment. One lesser difference to be noted is in fixing eight instead of six weeks before the commencement of a new year for notice to be given to medical practitioners on the panel of alterations made by committees in the terms of service for the coming year. This is under R. 16, but the concession of longer notice which otherwise would have been valued by the medical men is taken away by R. 17, which fixes six weeks instead of four before the commencement of any year as the limit for notices to be given by practitioners desiring to leave the panel. There is therefore still a period of two weeks only wherein to consider new conditions. In R. 14 a new clause (7) states that the period for which an insured person may be allowed to make his own arrangements shall be the period up to the end of the year in respect of which application is made or to the end of the succeeding year, as the committee think fit. Among other alterations of a verbal character attention may be called to R. 30, which is amplified, and contains a new clause enabling a medical man to get rid of a patient on his list by giving notice to the committee six weeks before the commencement of any year, and to R. 17 (3) affecting persons concerned with the estate of a deceased practitioner.

## REGULATION 44 (2).

Regulation 44 (2) is entirely new, and so controversial a matter as this should have been foreshadowed by inclusion in the Provisional Regulations, thus securing some opportunity for its discussion before its final adoption. Regulation 44 (1) deals with financial arrangements when an insured person makes his own arrangements for obtaining treatment from "a duly qualified medical practitioner," this part differing from the provisional regulation, presumably to suit what follows, for Clause 2 provides that "Where an insured person contracts with a person, other than a duly qualified medical practitioner, to obtain treatment (whether including drugs and appliances or not) from him for a fixed sum for the year or any part thereof, the committee may make such contribution towards the sum contracted to be paid, not exceeding in amount the maximum contribution payable in the case of a person who contracts with a duly qualified medical practitioner as they think fit, but upon any representation being made by a society that the treatment is such as will not adequately protect the funds of the society, the committee may either withhold the contribution or may make a deduction therefrom as they may in any case determine. (3) Save as aforesaid the committee shall not make any contribution in the case of an insured person making his own arrangements who obtains treatment otherwise than from a duly qualified medical practitioner." Clause 4 has also been freshly introduced, and apparently in this connexion. It will be seen from the above that the Insurance Commissioners have definitely recognised herbalists, bonesetters, and other unqualified persons generally, as persons with whom arrangements for "medical treatment" may be made by persons entitled to "medical benefit." It is submitted that the wide powers given to the Commissioners do not enable them thus to override one of the main principles upon which the Insurance Act was based. This was the provision for the working classes (from funds provided by them, by their employers, and by the State) of medical attendance, which was to take the place of complete neglect, and was to protect the ignorant and needy from unqualified persons and from the wiles of the vendor of quack medicines. The whole Act and every reference in it to the treatment to be provided will be found to bear out this contention, and it is to be hoped that a way may be found of testing the powers of the Commissioners thus to authorise the treatment of sickness by persons not recognised in any Act of Parliament as capable of providing any such treatment. The question is of interest, not only to insured persons, but to their employers, and it will no doubt receive serious consideration at the hands of the Approved Societies, who, at any rate, can make representations to the Insurance Committees. It will be remembered that by Section 65 of the Insurance Act, 1911, Regulations must be laid before both Houses of Parliament "as soon as may be," and that power is given to the King in Council to annul any Regulation upon being prayed to do so in an address presented by either House within 21 days of the Regulation being laid before it.

## THE WORKING OF SANATORIUM BENEFIT.

Dr. S. Vere Pearson has contributed to the *British Journal of Tuberculosis* some interesting notes upon the present aspects of the provision and administration of sanatorium benefit. Among points of interest to those who seek to prognosticate the financial future under the Act attention is called to the sufficiency of Insurance Act funds for providing sanatorium benefit in rural areas, as contrasted with their marked insufficiency in urban districts, where tuberculosis is more prevalent. He calls attention to the difficulty found in combining the efforts of voluntary charities with those of local and insurance authorities, to the abuse of State Medical Service in the case of tuberculosis by patients who consult tuberculosis officers when they can afford to pay private fees, and he makes interesting observations on the combination of preventive with curative medicine in the case of tuberculosis. He considers that in the present circumstances the rigid separation between preventive and curative medicine, which he ascribes to public health legislation, is disappearing year by year.

## THE INSURANCE ACT AND THE REORGANISATION OF PHARMACY.

The changes in pharmaceutical practice effected by the National Insurance Act have rendered necessary some considerable modification of the system of pharmaceutical organisation, and pharmacists are now engaged in modelling a new scheme. Recently a conference of delegates from

most of the English and Welsh counties and county boroughs was held in London under the chairmanship of Mr. Edmund White, president of the Pharmaceutical Society, who was attended by the secretary and most of the members of council, and after prolonged discussion it was resolved that a committee, to be called the Pharmaceutical General Committee, should be appointed, to be constituted as follows: The president and secretary of the Pharmaceutical Society, six members of the Council of the Pharmaceutical Society (to be appointed by the Council), seven panel chemists to be elected by delegates from the local associations, and two persons to be appointed by limited companies conducting the business of chemists. By this means a close alliance between the Pharmaceutical Society's Council and local organisations of chemists will be effected. Conferences of delegates will meet periodically and will decide upon the main principles to be followed by the general committee in matters arising out of the pharmaceutical service under the Insurance Act.

### THE NATIONAL MEDICAL UNION.

A meeting of the Federating Council of this Union was held on Jan. 31st, Dr. V. T. Greenyer in the chair. It was announced that the Islington Non-panel Association had decided to join the federation, and that at a meeting of non-panel practitioners in Bradford it was resolved to form a local branch in that neighbourhood. Amongst the correspondence a letter was read from a member of the Union asking for information with reference to the action of a neighbouring practitioner in writing to a patient of his to present herself to him for examination on behalf of the Prudential Approved Societies. Considerable interest was evinced on the point in view of similar cases reported in THE LANCET a short time ago. In submitting the report of the Executive Committee Dr. Greenyer stated that they had engaged and furnished an office at 346, Strand; that they had secured clerical assistance; and that they had discussed and issued to the press a short general memorandum of policy for purpose of making known the existence of the Union. It was resolved on the motion of the chairman that an Organisation Committee be formed with power of co-option, and that a Constitution Committee be appointed to consider the most suitable form of constitution for the purposes of the Union, and to draft proposals thereon, the opinion of the Council being that any questions pertaining to Trade Unionism need not be considered. Upon a proposal that the Council rule that no member of the National Medical Union be allowed to sign Form 43 I.C., considerable discussion arose, and it was resolved that this question be referred to a full general meeting of the Union, with an expression of opinion from the Council that no member should be allowed to sign this or any similar form in relation to any patient for whom he has not already signed such form.

It was resolved that practitioners attending members of the Seamen's National Insurance Society be not debarred from belonging to the Union; but the Council recommended practitioners not to sign the agreement of this Society.

Upon the motion of Dr. J. S. Prowse, instructed by the Manchester Union, it was resolved that members of the medical profession whose partners are upon the panel, but who do not see their partners' patients and whose deeds of partnership were in existence before the panels were formed, should not thereby be excluded from membership of the Union if approved by the Council after recommendation by their local non-panel association.

A written copy of Regulation 44 (2) was laid before the meeting by Mr. H. B. B. Greene. This Regulation is as follows:—

> Where the insured person contracts with a person other than a duly qualified practitioner to obtain treatment (whether including drugs and appliances or not) from him for a fixed sum for the year or any part thereof, the committee may make such contribution towards the sum contracted to be paid not exceeding in amount the maximum contribution payable in the case of a person who contracts with a duly qualified medical practitioner, as they think fit, but upon any representation being made by a society that the treatment is not such as will adequately protect the funds of the society, the committee may either withhold the contribution or make such a deduction as they may in any case determine.

Whereupon the Council resolved to protest against this Regulation containing provisions which seek to legalise the treatment of those insured under the Act by persons who are not duly qualified practitioners, and instructed the secretaries to bring the terms of the Regulation to the notice of the General Medical Council and to request them to take action.

## Medical News.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Abderhalden, Director of the Halle University Physiological Institute, has been appointed Director of the Berlin University Biological Research Laboratory, which is being erected at Dahlem.—*Breslau:* Dr. Karl Bruck, Senior Surgeon to the University Dermatological Clinic, has been appointed Director of the Altona Municipal Hospital for Skin and Venereal Diseases.—*Cincinnati (Ohio-Miami Medical College):* Dr. Simon P. Kramer has been appointed Professor of Clinical Medicine.—*Cracow:* Dr. Stanislaus Dománsky, Extraordinary Professor of the Special Pathology and Treatment of Nervous Diseases, has been promoted to Ordinary Professor.—*Dresden:* Dr. Nahmmacher has been appointed to the charge of the newly established Institute for Radium, Mesothorium, Thorium, and X Ray Treatment in connexion with the Carola Hospital.—*Genoa:* Dr. Carlo Gallia has been recognised as *privat-docent* of Dermatology and Syphiligraphy.—*Gratz:* Dr. Josef Hertle, Primararzt of the Provincial Hospital, and Dr. Edouard Streissler, Oberarzt of the University Surgical Clinic, have been granted the title of Extraordinary Professor.—*Greifswald:* Dr. Walter Loehlein, *privat-docent* of Ophthalmology, has been granted the title of Professor.—*Lille:* Dr. Le Fort has been promoted to Assistant Professor of Operative Medicine.—*Melbourne:* Dr. Felix Meyer has been appointed Lecturer in Midwifery and Gynæcology.—*Montreal (Laval University):* Dr. Zephir Rheaume has been appointed Professor of Experimental Surgery.—*Munich:* Dr. Franz Weber has been appointed Oberarzt of the University Gynæcological Clinic.—*Naples:* Dr. Giuseppe Sofrè has been recognised as *privat-docent* of Medical Pathology, and Dr. Liugi Marenduzzo as *privat-docent* of Medical Diagnosis.—*New York (University and Bellevue Hospital Medical School):* Dr. Lewis K. Neff has been appointed to the chair of Clinical Medicine.—*Odessa:* Dr. Kornmann has been recognised as *privat-docent* of Pathological Anatomy.—*Prague (Bohemian University):* Dr. Heinrich Chalupecky has been promoted to an Extraordinary Professorship of Ophthalmology.—*Strassburg:* Dr. G. Steiner has been recognised as *privat-docent* of Neurology and Psychiatry.—*Turin:* Dr. Piero Boveri and Dr. Gustavo Matticolo have been recognised as *privat-docenten* of Neurology.—*Vienna:* Dr. Hans Heyrovsky has been recognised as *privat-docent* of Surgery.

UNIVERSITY OF CAMBRIDGE.—The special Board for Medical Studies, in a revised report on the proposal to apply to the Board of Education for a grant towards the expenses of the medical school, state that there are at

present 330 medical students now in residence at the University, and that a sum of approximately £4600 might be expected, which would be of great value in relieving the most urgent needs of the medical department.

UNIVERSITY OF DURHAM.—Sir George Hare Philipson, M.D., previously vice-chancellor, has been appointed by the Senate to be one of the two Pro-Vice-Chancellors of the University.

THE Hon. H. L. W. Lawson will preside at a Jubilee festival dinner in aid of St. John's Hospital for Diseases of the Skin, to be held at the Princes Restaurant, London, on Tuesday, May 26th.

ROENTGEN SOCIETY.—A meeting of this society was held on Feb. 3rd at the London Hospital, when Mr. S. Gilbert Scott, medical officer in charge of the radiographical department, showed the members over the X ray and electro-therapeutic departments of the hospital, and demonstrated recent improvements in electro-medical apparatus.

Sir Ronald Ross, K.C.B., F.R.S., will deliver the first of a series of research lectures at the Institute of Hygiene, Devonshire-street, London, W., on Monday, Feb. 23rd, at 5 P.M., the subject being the Prevention of Mosquito-borne Diseases. Invitations, which are restricted to members of the medical profession, can be had on application to the secretary.

THE WOMEN'S IMPERIAL HEALTH ASSOCIATION.—The annual meeting of this association was held on Jan. 28th at 7, Hanover-square, London, W., the President, Muriel Viscountess Helmsley, being in the chair. A most satisfactory report of the year's work was submitted. Among the noticeable features were: Assistance in the establishment of schools for mothers in various metropolitan areas; the provision of an almoner and health visitors in connexion with lying-in hospitals and local charitable agencies in congested districts; and the continued progress of the Juvenile Health Crusade, the aim of which is to impart an elementary knowledge of health laws to school children. A large fête was held at the Crystal Palace in June and was attended by 2000 boys and girls. The association, in conjunction with the Women's National Health Association of Ireland, have produced a film dealing with tuberculosis, based upon "The Triumph" health play performed in November, 1912.

LORD STRATHCONA'S WILL.—Lord Strathcona's munificence towards education in general, and towards medical education in particular, were referred to in THE LANCET of Jan. 24th. His principal public bequests have now been announced. The Western Continent, of course, receives a large share of the legacies other than those of a personal nature, the Royal Victoria College, Montreal, receiving £200,000; the Royal Victoria Hospital, Montreal, £100,000; Yale University, Connecticut, £100,000; and Queen's University, Kingston, Canada, £20,000. The bequests to institutions in the British Isles are headed by one of £10,000 to St. John's College, Cambridge (this is in addition to £10,000 given during his lifetime), followed by £10,000 to the Leanchoil Cottage Hospital, Forres, £2000 to Queen Alexandra Extension Home and Hospital for Incurables, Streatham, and like sums to the National Hospital for Paralysed and Epileptics, University College Hospital, and the Middlesex Hospital. To the University of Aberdeen he left £5000 for a chair of agriculture.

FOURTEENTH FRENCH CONGRESS OF MEDICINE.—This Congress will take place in Brussels from Sept. 30th to Oct. 3rd, inclusive. The President is Professor Henrijean, the general secretary Professor René Verhoogen. The subjects for discussion will be: (1) Syphilis and the Cardio-vascular Apparatus—reporters, M. Bayet (Brussels), M. Etienne and M. Spillmann (Nancy), and M. Vaquez and M. Laubry (Paris); (2) The Lipoids in Pathology—reporters, M. Bordet (Brussels), M. Chauffard, M. Guy Laroche, and M. Grigaut (Paris), M. Linossier (Vichy), and M. Zunz (Brussels); (3) The Therapeutic Value of Artificial Pneumothorax—reporters, M. Burnand (Leysin), M. Dorscheid and M. Geeraerd (Brussels), M. Dumarest (Hauteville), and M. Küss (Angicourt). With the aim of grouping isolated communications in regard to some current topic, the Bureau suggests that future members of the Congress should confine themselves to (4) vaccinotherapy in general, and in particular vaccinotherapy in regard to cancer and typhoid fever. Intending members are requested to make their application to the general secretary, M. René Verhoogen, 22, rue Joseph II., Brussels, sending the subscription (20 francs) to the treasurer, Dr. Godart-Danhieux, 9A, rue Montoyer, Brussels. Ladies accompanying members and also medical students may become associate members on payment of 10 francs.

MEDICAL SOCIETY OF LONDON.—The programme for the second half of the 141st session includes a discussion on Monday next, Feb. 9th, on the Value of the Operation of Decompression of the Brain in cases of Intracranial Hæmorrhage, the outcome either of accident or disease, to be introduced by Mr. L. B. Rawling and Dr. P. Hamill; a discussion on March 9th on Radium Therapy, to be introduced by Mr. A. E. Hayward Pinch; and a discussion on May 11th on a case of Ascites and its Treatment, introduced by Dr. F. de Havilland Hall. The annual oration and conversazione have been arranged for May 18th, when the orator will be Mr. Robert Jones. The Lettsomian lectures on Dysentery by Dr. F. M. Sandwith have been unavoidably postponed until June 9th, 11th, and 16th. The anniversary dinner will be held at the Whitehall Rooms, Hotel Métropole, on Wednesday, March 4th, at 7.30 P.M.

INTERNATIONAL CONFERENCE ON THE BLIND.—The next conference will be held at the Church House, Westminster, London, S.W., under the patronage of H.R.H. the Duke of Connaught, from June 18th to 24th, both dates inclusive, and the committee offers a cordial invitation to all interested in the education, training and employment, and general well-being of the blind. A special feature of the conference will be an exhibition of the arts and industries of the blind, which will include, besides specimens of all kinds of work done by them in Great Britain and foreign countries, demonstrations by living workers, musical and gymnastic displays, stalls of books and apparatus, and medical appliances connected with the preservation and restoration of sight. English will be the official language, but interpreters will be in attendance when speeches are given in other languages. A hospitality committee is making preparations for the comfort and enjoyment of visitors, and Messrs. Thomas Cook and Son have been officially appointed agents to the conference in connexion with travelling facilities. The honorary secretary is Mr. Henry Stainsby, care of the British and Foreign Blind Association, 206, Great Portland-street, London, W.

HOLIDAY POST-GRADUATE COURSE AT THE HÔTEL DIEU, PARIS.—A course on the diseases of the liver, pancreas, and spleen will be held at the Medical Clinic of the Hôtel Dieu, under the direction of Professor Gilbert and Professor agrégé Maurice Villaret, from Monday, April 6th, to Saturday, April 18th, inclusive. The inaugural lecture will be given by Professor Villaret at 10 A.M. on April 6th, and thereafter there will be two classes daily, beginning respectively at 10.30 A.M. and 3 P.M. The instruction will be given by Dr. Paul Descomps, M. Deval, Dr. Herscher, Dr. Chabral, Professor Villaret, Dr. Lippmann, Dr. Bénard, Dr. Jourier, Dr. Guilleminot, Dr. Durey, Dr. Dausset, and M. Dumont. It will embrace the physical, clinical, and chemical examination of the liver and its functions, hyper- and hypo-functioning of the liver and hepatic insufficiency, results of urine and blood examinations in liver diseases, cholæmia, icterus, biliary cirrhoses, hæmolysins and hæmoglobinurias in relation to liver diseases, splenic syndromes and splenomegalia, portal hypotension, ascitic and pleural effusions in hepatic disease, biliary microbiology, angeiocholitis, cholecystitis, hepatic infections and abscesses and perihepatic suppuration, syphilis and tuberculosis of the liver and their laboratory diagnosis, hydatid cysts, cardiac liver, hepatic and biliary cancer, the rôle of the liver in glycosurias, biliary lithiasis, diabetes and pancreatic affections, glycæmia and glycosuria, the chemistry of the stomach and intestines, pancreatitis and cancer of the pancreas, biliary and pancreatic insufficiency, physical agents in exploration of the liver, spleen, and pancreas, tropical liver, general therapeutics of the liver, spleen, and pancreas, and the study of anatomical and histological specimens. There will be 26

lessons in the 11 days, which will be illustrated by photographs, kinematograph, and microscope, with presentation of patients and instruments. Students will be trained individually in the examination of patients, prescribing, the use of apparatus and laboratory manipulations, and may take away all preparations made by themselves. The fees are 100 francs. Foreign medical men are admitted. Application, with fees, should be made to the Secrétariat de la Faculté, Hôtel Dieu, Paris.

## BOOKS, ETC., RECEIVED.

ARNOLD, EDWARD, London.

A Pocket-book of Treatment. By Ralph Winnington Leftwich, M.D. Second edition, revised. Price 6s. net

BALE (JOHN), SONS, AND DANIELSSON, LIMITED, London.

Outlines of Greek and Roman Medicine. By James Sands Elliott, M.D., Ch.B. Edin., Editor of the "New Zealand Medical Journal." Price 7s. 6d. net.

CHATTO AND WINDUS, London.

Herbert Fry's Royal Guide to the London Charities. Edited by John Lane. 1914. Price 1s. 6d.

CONSTABLE AND CO., LIMITED, London.

A Way of Life. An Address to Yale Students, Sunday evening, April 20th, 1913. By William Osler. Price 1s. net.

GARDEN CITY PRESS, LIMITED, Letchworth.

The British Guiana Medical Annual for 1912. Edited by K. S. Wise, M.B., B.S., B.Sc., D.P.H., &c. Price 5s.

HEINEMANN, WILLIAM, London.

Ambidexterity and Mental Culture. By H. Macnaughton-Jones, M.D., M.Ch. Q.U.I., M.A.O. R.U.I. (Hon. Cau.), F.R.C.S.I. and Ed. Price 2s. 6d. net.

LEWIS, H. K., London.

Gould and Pyle's Pocket Cyclopedia of Medicine and Surgery. Second edition. Revised, enlarged, and edited by R. J. E. Scott, M.A., B.C.L., M.D., New York. Price 5s. net.

Ionic Medication. The Principles of the Method and an Account of the Clinical Results Obtained. By H. Lewis Jones, M.D., F.R.C.P. Lond., Consulting Medical Officer to the Electrical Department in St. Bartholomew's Hospital. Second edition. Price 5s. net.

LONGMANS, GREEN, AND CO., London, New York, Bombay, and Calcutta.

Chronic Colitis, its Causation, Diagnosis, and Treatment. By George Herschell, M.D. Lond., and Adolphe Abrahams, M.D. Cantab. Price 6s. net.

MACMILLAN AND CO., LIMITED, London.

Studies in Water Supply. By A. C. Houston, D.Sc., M.B., C.M., Director of Water Examination, Metropolitan Water Board. Price 5s. net.

# Appointments.

*Successful applicants for vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to* THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ABRAM, G. STEWART, M.B., B.C. Cantab., has been appointed Honorary Physician to the Royal Berkshire Hospital, Reading.

ADAMS, J. A., M.B., B.Ch. R.U.I., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Sowerby Bridge District of the county of York.

ARMSTRONG, W. H. STIRLING, M.B., Ch.B. Glasg., has been appointed Visiting Superintendent of Renfrew and Clydebank Joint Hospital for Infectious Diseases.

ASKEY, S. G., M.R.C.S., L.R.C.P. Lond., has been appointed Casualty Officer and Resident Anæsthetist at St. Thomas's Hospital.

BALLANCE, A. C., M.R.C.S., L.R.C.P. Lond., has been appointed Clinical Assistant to the Children's Surgical Department at St. Thomas's Hospital.

BARNES, H. E., M.D. Lond., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Eye District of the county of Suffolk.

BIGGER, W. G., M.R.C.S., L.R.C.P. Lond., has been appointed Casualty Assistant at St. Thomas's Hospital.

BIRD, G. A., M.R.C.S., L.R.C.P. Lond., has been appointed Clinical Assistant to the Children's Surgical Department at St. Thomas's Hospital.

BOURDILLON, L. G., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Physician at St. Thomas's Hospital.

BOYD, R. J., M.R.C.S., L.R.C.P. Lond., has been appointed Junior Obstetric House Physician at St. Thomas's Hospital.

BUZZARD, E. FARQUHAR, M.D. Oxon., F.R.C.P. Lond., has been appointed as an additional Consulting Physician to the Royal Hospital for Incurables, Putney Heath.

CASEY, JOSEPH, L.R.C.P. & S. Irel., has been appointed Medical Officer for Clifden by the Clifden Board of Guardians.

CRAKE, H. M., M.D. Vict., D.P.H., has been appointed Chief Medical Officer of Health for the City of Calcutta.

DAUNT, F. B., M.B., B.S. Lond., has been appointed Casualty Officer and Resident Anæsthetist at St. Thomas's Hospital.

DAVIES, J. C., M.R.C.S., L.R.C.P. Lond., has been appointed Clinical Assistant to the Ear Department at St. Thomas's Hospital.

DAWSON, H. P., M.R.C.S., L.R.C.P. Lond., has been appointed Casualty Officer and Resident Anæsthetist at St. Thomas's Hospital.

DOORLY, A. R. C., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Surgeon at St. Thomas's Hospital.

DOYNE, P. G., M.B., B.Ch. Oxon., has been appointed Casualty Officer and Resident Anæsthetist at St. Thomas's Hospital.

FIRTH, DOUGLAS, M.D. Cantab., M.R.C.P. Lond., has been appointed Assistant Physician to the Royal Free Hospital.

HALLOWS, N. F., M.B., B.Ch. Oxon., has been appointed Senior Obstetric House Physician at St. Thomas's Hospital.

HEBERT, G. T., M.B., B.Ch. Oxon., has been appointed Clinical Assistant to the Children's Medical Department at St. Thomas's Hospital.

HOBHOUSE, E. W. N., M.B., B.Ch. Oxon., has been appointed Resident House Physician at St. Thomas's Hospital.

LUMB, N. P. L., M.R.C.S., L.R.C.P. Lond., has been appointed Clinical Assistant to the Skin Department at St. Thomas's Hospital.

MCMILLAN, K. H., M.R.C.S., L.R.C.P. Lond., has been appointed Clinical Assistant to the Throat Department and to the Urological Department at St. Thomas's Hospital.

MARSHALL, E. H., M.R.C.S., L.R.C.P. Lond., has been appointed Ophthalmic House Surgeon at St. Thomas's Hospital.

MEREDITH, R. W. H., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Wellington District of the county of Somerset.

MOWBRAY, R. M. DE, M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Surgeon at St. Thomas's Hospital.

PENNELL, V. C., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Surgeon at St. Thomas's Hospital.

PLATTS, S. G., M.R.C.S., L.R.C.P. Lond., has been appointed Clinical Assistant to the Throat Department at St. Thomas's Hospital.

RAYNER, E., M.B., B.C. Cantab., F.R.C.S. Eng., has been appointed House Surgeon at St. Thomas's Hospital.

REECE, L. N., M.R.C.S., L.R.C.P. Lond., has been appointed Casualty Officer and Resident Anæsthetist at St. Thomas's Hospital.

SARGENT, E. L. K., M.B., B.C. Cantab., has been appointed Resident House Surgeon at St. Thomas's Hospital.

SHARP, L. E. S., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Physician at St. Thomas's Hospital.

SHIELD, HUBERT, M.B., B.C. Durh., has been appointed Assistant Medical Officer to the Gateshead Borough Asylum.

SLOPER, J. S., M.R.C.S., L.R.C.P. Lond., has been appointed Casualty Officer and Resident Anæsthetist at St. Thomas's Hospital.

SPARROW, J. A. G., M.B., B.Ch. Oxon., has been appointed Clinical Assistant to the Children's Medical Department at St. Thomas's Hospital.

SYMONS, W. J. F., M.B., B.C. Cantab., has been appointed Casualty Officer and Resident Anæsthetist at St. Thomas's Hospital.

VINEY, A., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Physician at St. Thomas's Hospital.

WHEELER-BENNETT, C. W., M.B., B.Ch. Oxon., has been appointed Casualty Assistant at St. Thomas's Hospital.

WILLIAMSON, ALFRED J., M.D. Aberd., D.P.H. Cantab., has been appointed Tuberculosis Official for the County of Essex under the London County Council.

WORDLEY, E., M.B., B.C. Cantab., has been appointed Casualty Officer and Resident Anæsthetist at St. Thomas's Hospital.

# Vacancies.

*For further information regarding each vacancy reference should be made to the advertisement (see Index).*

AYLESBURY, ROYAL BUCKINGHAMSHIRE HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board, washing, and lodging.

BANBURY, HORTON INFIRMARY.—House Surgeon. Salary £120 per annum, with board and residence.

BARRY URBAN DISTRICT COUNCIL TOWN ACCIDENT AND SURGICAL HOSPITAL.—House Surgeon. Salary £150 per annum, with board, lodging, and laundry.

BIRKENHEAD BOROUGH HOSPITAL.—Senior House Surgeon and Junior House Surgeon. Salary £120 and £100 per annum respectively, with board and laundry.

BIRKENHEAD UNION.—Senior Resident Assistant Medical Officer. Salary £150 per annum, with board, apartments, &c.

BIRMINGHAM AND MIDLAND EYE HOSPITAL, Church-street.—Pathologist. Salary £50 per annum.

BIRMINGHAM UNION INFIRMARY.—Resident Assistant Medical Officer. Salary £160 per annum.

BLACKBURN COUNTY BOROUGH EDUCATION COMMITTEE.—School Medical Inspector and Assistant to Medical Officer of Health. Salary £250 per annum.

BODMIN, CORNWALL COUNTY ASYLUM.—Third Assistant Medical Officer. Salary £180 per annum, with quarters, board, laundry, and attendance.

BRADFORD ROYAL INFIRMARY.—Resident Surgical Officer, unmarried. Salary £150 per annum, with board and residence.

CALCUTTA, CORPORATION OF.—Two District Health Officers. Salary Rs.500 per month each, and all allowances.

CANCER HOSPITAL (FREE), Fulham-road, London, S.W.—House Surgeon for six months. Salary £70 per annum.

CANTERBURY, KENT COUNTY ASYLUM, Chartham.—Junior Assistant (Third) Medical Officer, unmarried. Salary £220 per annum, with apartments, attendance, laundry, &c.

CARDIFF CITY MENTAL HOSPITAL, Whitchurch, near Cardiff.—Second Assistant Medical Officer, unmarried. Salary £250 per annum and all found.

CARDIFF, KING EDWARD VII.'s HOSPITAL.—House Physician for six months. Salary at rate of £60 per annum, with board, residence, and laundry.

CARMARTHEN, JOINT COUNTIES ASYLUM.—Second Assistant Medical Officer. Salary £200 per annum, with board, lodging, washing, &c.

CHESTER, COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £200 per annum, with board, lodging, and washing.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Honorary Radiographer. Also Physician to Out-patients.

COBHAM, SURREY, SCHIFF HOME OF RECOVERY.—Resident Surgical Officer for six months. Salary £100, with board, lodging, and washing.

COLCHESTER, ESSEX COUNTY HOSPITAL.—House Physician. Salary £100 per annum, with board, residence, and washing.

DARENTH INDUSTRIAL COLONY FOR THE FEEBLE-MINDED, Dartford, Kent.—Third Assistant Medical Officer, unmarried. Salary £180 per annum, with board, lodging, and washing

DERBY COUNTY ASYLUM, Mickleover, Derby.—Junior Assistant Medical Officer. Salary £200 per annum, with board, lodging, and washing.

DEWSBURY AND DISTRICT GENERAL INFIRMARY.—House Surgeon. Salary £120 per annum, with board, residence, and washing.

DORCHESTER, DORSET COUNTY HOSPITAL.—House Surgeon, unmarried. Salary £125 per annum, with residence, board, and laundry.

DURHAM COUNTY ASYLUM.—Third and Fourth Assistant Medical Officers, unmarried. Salary £200 per annum, with board, lodging, and washing.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—House Physician and Assistant Casualty Officer for six months. Salary at rate of £75 per annum, with board, residence, laundry, &c.

EAST SUFFOLK, ADMINISTRATIVE COUNTY OF.—Assistant to County Medical Officer of Health. Salary £300 per annum.

EAST SUSSEX COUNTY ASYLUM, Hellingly.—Third Assistant Medical Officer, unmarried. Salary £200 per annum, with board, apartments, washing, and attendance.

EXMINSTER, DEVON COUNTY ASYLUM.—Assistant Medical Officer. Salary £220 per annum, with quarters, board, and laundry.

FARRINGDON GENERAL DISPENSARY AND LYING-IN CHARITY, 17, Bartlett's-buildings, Holborn Circus, E.C.—Resident Medical Officer. Salary £100 per annum, with rooms, attendance, fire, and lighting.

GLASGOW DISTRICT MENTAL HOSPITAL, Lenzie.—Junior Assistant Medical Officer, unmarried. Salary £230 per annum, with board, lodging, attendance, and laundry.

GLOUCESTER, BARNWOOD HOUSE HOSPITAL FOR MENTAL DISEASES.—Second Assistant Medical Officer. Salary £200 per annum, with board, &c.

GREAT YARMOUTH HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board, lodging, and washing

HOLBORN UNION INFIRMARY, Archway-road, Upper Holloway, N.—Second Assistant Medical Officer. Salary £110 per annum, with board, apartments, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—House Physician and House Surgeon, unmarried, for six months. Salary £30 each, with board and residence, &c. Also Surgeon Dentist.

KENSINGTON AND FULHAM GENERAL HOSPITAL, Earl's Court.—Resident Medical Officer. Salary at rate of £70 per annum, with board and laundry.

LEEDS GENERAL INFIRMARY.—Resident Medical Officer for six months at Ida and Robert Arthington Hospitals. Salary £60 per annum, with board, residence, and laundry. Also House Physician and House Surgeon, each for six months, without salary, but board, residence, and laundry provided.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary £100 per annum, with board, residence, and laundry.

LEICESTER, LEICESTERSHIRE COUNTY COUNCIL.—Assistant Tuberculosis Medical Officer. Salary at rate of £300 per annum.

LIVERPOOL CITY INFECTIOUS DISEASES HOSPITAL.—Two Assistant Resident Medical Officers, unmarried. Salary £150 per annum, with board, washing, and lodging.

LIVERPOOL, TOWNSHIP OF TOXTETH PARK WORKHOUSE AND INFIRMARY.—Assistant Resident Medical Officer. Salary £125 per annum, with board, washing, and apartments.

LONDON HOMŒOPATHIC HOSPITAL, Great Ormond-street and Queen-square, Bloomsbury, W.C.—Assistant Pathologist. Salary £50 per annum.

LONDON LOCK HOSPITAL.—Assistant House Surgeon. Salary £30 per annum, with board, lodging, and washing.

MAIDSTONE, KENT COUNTY ASYLUM.—Fourth Assistant Medical Officer, unmarried. Salary £200 per annum, with quarters, attendance, washing, &c.

MANCHESTER TOWNSHIP WORKHOUSE, Crumpsall.—Second Resident Assistant Medical Officer and Junior Resident Assistant Medical Officer, unmarried. Salary £135 and £120 per annum respectively, with rations, apartments, washing, attendance, &c.

METROPOLITAN EAR, NOSE, AND THROAT HOSPITAL, Fitzroy-square, W.—Clinical Assistant.

MIDDLESEX HOSPITAL, W.—Director of Institute of Pathology. Salary £300 per annum.

NEW HOSPITAL FOR WOMEN, 144, Euston-road, N.W.—Female Senior Clinical Assistants in Out-patient Department and Clinical Assistants for Ophthalmic Department.

NEWPORT (MON.), ROYAL GWENT HOSPITAL.—Resident Medical Officer. Salary at rate of £100 per annum, with board, residence, and laundry.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon, unmarried. Salary £180 per annum, with apartments, &c.

PERTH DISTRICT ASYLUM.—Assistant Physician. Salary £150 per annum and all found

PORTSMOUTH BOROUGH ASYLUM.—Assistant Medical Officer, unmarried. Salary £200 per annum, with board, lodging, and washing.

PRESTON, COUNTY ASYLUM, Whittingham.—Assistant Medical Officer, unmarried. Salary £250 per annum, with board, apartments, and washing.

PRESTON ROYAL INFIRMARY.—House Physician. Salary £100 per annum, with board, residence, and laundry.

READING, ROYAL BERKSHIRE HOSPITAL.—Second House Surgeon. Salary at rate of £80 per annum, with lodging, board, and laundry. Also Honorary Assistant Physician.

ROYAL EAR HOSPITAL, Soho.—House Surgeon. Salary £40 per annum.

ROYAL NAVAL MEDICAL SERVICE.—Twenty-five Appointments.

RYDE, ROYAL ISLE OF WIGHT COUNTY HOSPITAL.—Resident House Surgeon, unmarried. Salary £125 per annum.

ST. AUSTELL UNION AND RURAL DISTRICT COUNCIL AND WORKHOUSE.—Medical Officer. Salary £400 per annum for combined appointment.

ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN, Plaistow, E.—Junior Resident Medical Officer. Salary at rate of £70 per annum, with board, residence, and laundry.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Senior House Surgeon. Salary £100 per annum, with board, residence, &c. Also Junior House Surgeon. Salary £80 per annum, with board, residence, &c.

SHEFFIELD CITY EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary £300 per annum.

SOUTHAMPTON FREE EYE HOSPITAL.—House Surgeon. Salary £100 per annum, with board, lodging, and laundry.

SMETHWICK COUNTY BOROUGH EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary £250 per annum.

SOUTHWARK UNION INFIRMARY, East Dulwich-grove, S.E.—Second Assistant Medical Officer and Third Assistant Medical Officer. Salary at rate of £120 per annum each, with board, lodging, and washing.

STRAITS SETTLEMENTS GOVERNMENT.—Three Medical Officers. Salary £300 per annum.

SUNDERLAND ROYAL INFIRMARY.—House Physician. Salary £120 per annum, with board, residence, and laundry.

TADCASTER, GOOLE, RICCALL, AND SELBY RURAL DISTRICTS AND SELBY URBAN DISTRICT.—Medical Officer of Health. Salary £500 per annum.

TOOTING BEC ASYLUM, Tooting, S.W.—Third Assistant Medical Officer, unmarried. Salary £180 per annum, with board, lodging, and washing.

TOTTENHAM EDUCATION COMMITTEE.—School Dentist. Salary at rate of £250 per annum.

WALTHAMSTOW URBAN DISTRICT COUNCIL HOSPITAL FOR INFECTIOUS DISEASES, Chingford.—Resident Medical Officer. Salary £150 per annum, with rooms and board.

WARRINGTON, LANCASHIRE COUNTY ASYLUM, Winwick.—Pathologist and Assistant Medical Officer, unmarried. Salary £250 per annum, with board, apartments, attendance, and washing.

WARWICK COUNTY ASYLUM, Hatton, near Warwick.—Second Assistant Medical Officer, unmarried. Salary £225 per annum, with board, lodging, and laundry.

WEST BROMWICH AND DISTRICT HOSPITAL.—Assistant Resident House Surgeon and Anæsthetist, unmarried. Salary £75 per annum, with board, residence, and washing.

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford.—Junior House Physician. Salary at rate of £75 per annum, with board, residence, and washing.

WINCHESTER, ROYAL HAMPSHIRE COUNTY HOSPITAL.—Honorary Surgeon-in-Ordinary.

WOOD GREEN URBAN DISTRICT.—Ophthalmic Surgeon.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Acts at High Wycombe, in the county of Bucks; and at Lynton, in the county of Devon.

*** The summary of vacant appointments, published weekly in this column, is, equally with other articles, the literary copyright of the Proprietors of THE LANCET.

# Births, Marriages, and Deaths.

## BIRTHS.

EVE.—On Jan. 28th, to Dr. and Mrs. Frank Eve, Albion-street, Hull, a son.

WOOLLEY.—On Feb. 1st, at Lower Camden, Chislehurst, the wife of Victor James Woolley, M.D., of a daughter.

## MARRIAGES.

ATKINSON—TREGASKES.—On Jan. 27th, at St. Mark's, Farnborough, Charles Henry Fairbank Atkinson, Physician and Surgeon, of St. Tudy, Cornwall, to Maude Marion, daughter of the late Nicholas Henry Tregaskes, of Bude, Cornwall.

CAMPBELL—WALLACE.—On Jan. 29th, at Melton Ross, by the father of the bride, John J. W. Campbell, L.R.C.P. & S., to Eva, daughter of the Rev. J. D. C. and Mrs. Wallace, of Melton Ross, Lincolnshire.

CARTER—BELOE.—On Jan. 26th, at the Cathedral, Calcutta, Humphrey Gilbert Carter, M.B., to Dorine Nanette, youngest daughter of Mr. and Mrs. Beloe, Canynge-road, Clifton, Bristol.

DOBRASHIAN—HERBERT.—On Jan. 29th, at the Friends' Meeting House, St. Martin's-lane, Rowland Dobrashian, M.B., B.Sc., &c., to Muriel, only daughter of Sir Jesse and Lady Herbert, of Sudbury Hill, Harrow.

## DEATHS.

GÜNTHER.—On Feb. 1st, at Lichfield-road, Kew Gardens, Albert Günther, M.A., M.D., F.R.S., in his 84th year.

JOHNSTONE.—On Jan. 25th, suddenly, at 10, Southwick-street, Hyde Park, James Pierce Johnstone, L.R.C.P., L.R.C.S., &c., of Langport, Somerset, aged 55 years, son of the late John Maxwell Johnstone, M.D., Medical Officer of Health, Georgetown, Demerara.

RAWLINS.—On Jan. 23th, at Greencroft-gardens, Hampstead, William Peter Rawlins, M.D., in his 74th year.

*N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

# Notes, Short Comments, and Answers to Correspondents.

## TWO INQUESTS ON BURNING FATALITIES.

THE increased use of celluloid and the dangers accompanying its storage and handling were discussed in a leading article in THE LANCET of Dec. 20th, 1913, p. 1781. A typical instance of a fire due to celluloid in domestic use which was aggravated by the wearing of another notoriously dangerous material, flannelette, came before the coroner at Shepton Mallet recently. A cook attired in a flannelette nightdress and petticoat accidentally lighted a celluloid pin in her hair while preparing for bed, and the burning pin, falling on the flannelette, set fire to it, the unfortunate woman thus meeting her death. It is, of course, difficult to prevent by legislation the manufacture and sale of cheap and unsafe articles of women's clothing or ornament, and it seems almost equally hopeless to try to inculcate prudence in the users of the two materials mentioned. Of course, horn and tortoise-shell are much dearer and also sometimes easily split or the rivets become loose. Moreover, the imitation is frequently far more gaudy. Another sad and avoidable death from fire recorded during the recent cold weather occurred at Guy's Hospital, when a girl, 19 years of age, employed as a clerk in the almoner's office, set light to her apron while warming herself before an open grate with fatal results, efforts being vainly made by one of the sisters to extinguish the flames. Such accidents in a hospital are fortunately very rare. The female dress often bulges, and when the back is partly turned to the open grate a jet of flame from gassy coal can easily set light to inflammable material. A woman wearing a flannelette blouse and stretching her arm over a gas-stove or naked light undergoes the risk of the flame running up her arm. Since the date of these occurrences the Home Secretary has caused local authorities to be notified that the legislation enacted with regard to flannelette must not be allowed to become inert, and the public are urged to use the powers and officials at their command for the purpose of compelling precautions to be observed by traders and users.

## CENTIMETRES AND INCHES.

*To the Editor of* THE LANCET.

SIR,—Any medical man who uses a typewriter may find it convenient to know that he can easily obtain a very close approximation of centimetres and inches by typewriting the oblique stroke followed by three dashes (not the underline stroke), as follows:—

/———/———/———/———/———/———/———/———/

The oblique strokes automatically mark off the centimetres, and the middle of the last dash in a series of 15 centimetres gives the measurement exactly (on trials with the latest Yost machine at all events); and the full length of the series of 15 divisions, of course, is 6 inches, the typewriter scales all being adjusted to inches and tenths of inches, one letter or space occupying one-tenth of an inch.

I am, Sir, yours faithfully,

London, Jan. 28th, 1914. W.

## CURIOSITIES OF COAL.

WITH the recent strike of London coal-porters still fresh in our minds, writes a correspondent, it is curious to note that coal since its first introduction has been a cause of trouble. The short history is as follows: It is said to have been found at Newcastle in 853; it was mentioned by Bishop Hugh Pudsey of Durham in 1180; a charter granted by Henry III. in 1239 to Newcastle for digging coles; it was first actually sold in London in 1240; generally used by traders in London 1400. In 1306, however, Parliament petitioned Edward I. to prohibit the burning of coal as an intolerable nuisance. He did do so, but coal progressed. In the reign of Charles I. its use became universal in London. A tax of 2*d.* a chaldron on coal sold by Newcastle was imposed in 1421, and made payable to the King, but arrears caused the town voluntarily to pay Queen Elizabeth a duty of 1*s.* a chaldron. This duty was granted by Charles II. to his son the Duke of Richmond in 1677; hence it became known as the Richmond shilling, which was finally relinquished on March 1st, 1831. In the reign of William III. the tax was 5*s.* per chaldron, but during the French Revolution it was raised to 9*s.* 4*d.* In 1824 it was reduced to 6*s.*, and in 1831 was repealed. The Corporation of London, however, from a very early period had undertaken the task of weighing and measuring the coal brought to London, and charged 8*d.* a ton for their trouble; and there was a tax imposed on sea-borne coals for the rebuilding of St. Paul's Cathedral, which was destroyed in the Great Fire of 1666. Its cost was, according to the late Mr. W. H. Overall, librarian of the Corporation of the City of London, £736,752 2*s.* 3½*d.* (The farthing is said to have been added by a scrupulous dean.) The corporation spent the money on city architectural improvements. In 1851 its gross revenue from the duty, then 1*s.* 1*d.* per ton, 1*d.* and 4*d.* having been added by two Acts of Parliament, was £187,991 16*s.* 4½*d.*, according to a Parliamentary paper. In 1842 Sir Robert Peel imposed a duty of 2*s.* to 4*s.* a ton, but it caused much dissatisfaction and was repealed in 1845. There were said to be in the year 1829 in London of whippers, lightermen, and so forth, 5000 men; factors, agents, &c., on the Coal Exchange, 2500—7500 in all in London. The following were the contract prices of coal supplied to Greenwich Hospital in the years mentioned: 1730, £1 4*s.* 6*d.* per chaldron; 1745, £1 10*s.* per chaldron; 1780, £1 17*s.* 3*d.* per chaldron; 1805, £2 11*s.* 8½*d.* per chaldron. The report on wholesale and retail prices, issued in 1903 by order of the House of Commons, gives a table of the same hospital starting with the year 1805, and the original prices per chaldron up to 1831 have been converted by the compilers into tons at 25½ cwt. to the chaldron, conformably to an Act of William IV., and this makes the price for 1805 40*s.* 6½*d.* per ton; in 1810 it was 47*s.* 7*d.*; in 1814, 48*s.* 9½*d.*, when it seems to have reached high-water mark; and thereafter gradually sank to 14*s.* 11*d.* in 1834 (save one exceptional year, 1849, when it was 14*s.* 9*d.*). In 1840 it was 19*s.* 8*d.*; in 1850, 17*s.* 11*d.*; 1860, 17*s.* 9*d.* In 1872, 25*s.*; 1880, 17*s.*; 1888, 14*s.* 10½*d.*; 1890, 18*s.* 5*d.*; 1895, 16*s.* 5½*d.*; 1899, 15*s.* 11*d.*; 1900, 26*s.* 9*d*; 1901, 18*s.* 11*d.* There is also a table of the prices paid by the Bethlem Royal Hospital, London, from 1855 to 1902, and comparison shows that in many cases they paid from 1*s.* to 2*s.* more a ton than Greenwich, but in a few cases that amount less per ton. The estimated value at the pit's mouth ranged from 3*s.* 8*d.* up to about 12*s.* per ton in various years and places. The average price in 1912, according to the report of the Chief Inspector of Mines issued a month ago, was 9*s.* 0·68*d.* per ton at the pit mouth, a rise of about 11*d.* per ton on the previous year, said to be due to the national strike of colliery workers in 1912. There is no doubt the freight and other charges and profits run up the price of coal to the actual consumer very considerably.

Dr. Binnie Dunlop, Alexandra Court, London, S.W., writes that he will give a copy of "The Small Family System: Is it Injurious or Immoral?" to any medical practitioner sending him name and address.

*Torbay.*—The food in question contains as much carbohydrate as wheat flour, but the claim is that the starch is so modified in the process of preparation that it is easily digested and easily assimilated, and in fact yields oxidation products without aggravating the disease. Tolerance, however, in this matter can only be decided by individual cases. (*Vide* THE LANCET, June 17th, 1905, Analytical Records.)

*Mr. Geo. J. Dale.*—No time limit can be given because no two cases are exactly alike.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

## A DIARY OF CONGRESSES.

THE following Congresses, Conferences, and Exhibitions are announced. In 1914:—

Feb. 7th-11th (Glasgow).—Northern Nursing and Midwifery Conference.
,, 9th-14th (Auckland).—Australasian Medical Congress.
April 13th-16th (New York).—Fourth Congress of the International Surgical Society. (President: Prof. Depage, Bruxelles.)
,, 15th-18th (Berlin).—Forty-third Congress of the German Surgical Society.
,, 20th-23rd (Wiesbaden).—Thirty-first German Congress for Internal Medicine.
,, 27th-May 1st (London, Royal Horticultural Hall).—Nursing Conference and Exhibition.
May 1st-Nov. 1st (Lyons).—International Town Hygiene Exhibition.
June 18th-24th (London, Church House, Westminster).—International Conference on the Blind.
July 6th-11th (Blackpool).—Twenty-ninth Congress of the Royal Sanitary Institute.
,, 8th-10th (Oxford).—Ophthalmological Congress.
,, 8th-13th (Edinburgh).—Congress of the Royal Institute of Public Health.
,, 21st-23rd (Chester).—British Pharmaceutical Conference.
,, 27th-31st (London).—Fifth Annual Session of the Clinical Congress of Surgeons of North America.
,, 28th-31st (Aberdeen).—Eighty-second Annual Meeting of the British Medical Association.
Aug. 3rd-8th (London).—Sixth International Dental Congress.
,, 10th-15th (St. Petersburg).—Twelfth International Congress of Ophthalmology.
Sept. 7th-12th (Berne).—International Congress for Neurology, Psychiatry, and Psychology.
,, 30th-Oct. 3rd (Brussels).—Fourteenth French Congress of Medicine.

# Medical Diary for the ensuing Week.

## SOCIETIES.

**ROYAL SOCIETY**, Burlington House, London, W.

THURSDAY.—Mr. S. G. Brown: Chemical Action that is Stimulated by Alternating Currents (communicated by Prof. J. Perry).—Mr. R. D. Oldham: On the Effect of the Gangetic Alluvium on the Plumb-line in Northern India.—Mr. G. W. Walker: Note on the Origin of Black Body Radiation.—Prof. H. M. Macdonald: The Transmission of Electric Waves along the Earth's Surface.—Mr. G. T. Beilby: Transparence or Translucence of the Surface Film produced in Polishing Metals.—Mr. A. O. Watkins: A Method of Avoiding Inaccuracy Due to Weight Errors in "Fixing" a Gold Coinage Standard Trial Plate (communicated by Sir R. Thorpe).—Dr. S. W. J. Smith and Mr. J. Guild: A Thermomagnetic Study of the Eutectoid Transition Point of Carbon Steels (communicated by Prof. H. L. Callendar).—Mr. W. R. Bousfield: Note on Osmotic Pressure (communicated by Sir W. Ramsay).

**ROYAL SOCIETY OF MEDICINE**, 1, Wimpole-street, W.

TUESDAY.

SECTION OF SURGERY (Hon. Secretaries—J. Murray, Raymond Johnson): at 5.30 P.M.

*Papers:*

Mr. W. G. Spencer: The Thyreoglossal Tract.

Mr. H. J. Curtis: The Most Efficient Method of Drainage in Septic Peritonitis.

SECTION OF OBSTETRICS AND GYNÆCOLOGY: Members of this Section are invited to attend the Meeting of the Section of Surgery.

WEDNESDAY.

SECTION OF SURGERY: SUB-SECTION OF PROCTOLOGY (Hon. Secretaries—P. Lockhart Mummery, W. Sampson Handley): at 5 P.M.

*Paper:*

Mr. Hamilton Drummond: An Anatomical Study of the Vessels of the Pelvic Colon and Rectum, with Special Reference to the Operation for Abdomino-perineal Excision.

*Cases and Specimens:*

Mr. Percy Furnivall: Three Recent Specimens of Multiple Polypi becoming Carcinomatous: Two of the Rectum and One of the Sigmoid Colon.

Mr. Ivor Back: Case and Specimen of Multiple Polypi of the Colon becoming Carcinomatous.

Mr. C. Gordon Watson: Specimen of Inoperable Carcinoma of the Rectum in a Woman aged 20.

Mr. Sampson Handley: Specimen of Rectum removed by Operation subsequent to Treatment by Radium.

FRIDAY.

CLINICAL SECTION (Hon. Secretaries—W. Essex Wynter, Thomas H. Kellock): at 8.30 P.M.

*Cases in which Splenectomy has been Performed or is Contemplated for Disease.*

Cases will be shown by Dr. T. R. Whipham, Dr. James Collier and Mr. Crisp English, Sir Bertrand Dawson, K.C.V.O., Mr. Percy Sargent, Dr. Herbert French and Mr. Philip Turner, Mr. E. W. Everett (Norwich), Dr. W. Essex Wynter and Sir John Bland-Sutton, Fleet-Surgeon P. W. Bassett-Smith, C.B., and Dr. Thursfield.

**MEDICAL SOCIETY OF LONDON**, 11, Chandos-street, Cavendish-square, W.

MONDAY.—8.30 P.M., Discussion on the Value of the Operation of Decompression of the Brain in Cases of Intracranial Hæmorrhage, the Outcome either of Accident or Disease (introduced by Mr. L. B. Rawling and Dr. Hamill). Followed by Mr. C. A. Ballance, Mr. P. Sargent, Dr. J. Bury, and others.

**SOCIOLOGICAL SOCIETY**, Hall of the Royal Society of Arts, 18, John-street, Adelphi, W.C.

TUESDAY.—5.15 P.M., Dr. W. Brown: Psycho analysis and the Problem of Personality.

**SOUTH-WEST LONDON MEDICAL SOCIETY**, Bolingbroke Hospital, Wandsworth Common, S.W.

WEDNESDAY—9 P.M, Dr. F. J. Smith: Cough as a Diagnostic Symptom.

**UNITED SERVICES MEDICAL SOCIETY**, Royal Army Medical College, Grosvenor-road, S.W.

THURSDAY.—5 P.M., Col. S. Westcott, C.M.G., A.M.S.: The Siege of Ladysmith.

**HARVEIAN SOCIETY OF LONDON**, Stafford Rooms, Titchborne-street, Edgware-road, W.

THURSDAY.—8.30 P.M., Discussion on Oral Sepsis in its Medical and Surgical Aspects (opened by Dr. W. Hunter, Mr. Dolamore, and Dr. Charles Buttar).

**NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY**, Board Room of the Great Northern Central Hospital, Holloway-road, N.

THURSDAY.—8.30 P.M., Clinical Evening.

**WIMBLEDON AND DISTRICT MEDICAL SOCIETY**, Johnston's Rooms, 6, Broadway, Wimbledon, S.W.

FRIDAY.—9 P.M., Address:—Dr. F. G. Crookshank: Notes from the Out-patient Department of a Children's Hospital, being a Discursive Discussion of Some Every-day Difficulties.

## LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

**ROYAL COLLEGE OF SURGEONS OF ENGLAND**, Lincoln's Inn Fields, W.C.

MONDAY.—5 P.M., Hunterian Lecture:—Prof. A. R. Short: Changes in the Blood in the Causation of Surgical Shock

FRIDAY.—5 P.M., Hunterian Lecture:—Prof. B. Whitehouse: The Pathology and Causation of Idiopathic Uterine Hæmorrhage.

**MEDICAL GRADUATES' COLLEGE AND POLYCLINIC**, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Dr. D. Corbett: Clinique (Skin). 5.15 P.M., Lecture:—Dr. R. D. Maxwell: Common Errors in Diagnosis—Obstetrics.

TUESDAY.—4 P.M., Dr. R. C. Jewesbury: Clinique (Medical). 5.15 P.M., Lecture:—Dr. F. W. Price: Common Errors in Diagnosis—Cardiac Diseases.

WEDNESDAY.—4 P.M., Mr. S. Handley: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. A. P. Luff: Common Errors in Diagnosis—Joints (Medical).

THURSDAY.—4 P.M., Mr. J. M. G. Swainson: Clinique (Surgical). 5.15 P.M., Lecture:—Mr. G. E. Waugh: Common Errors in Diagnosis—Joints (Surgical).

FRIDAY.—4 P.M., Mr. G. W. Thompson: Clinique (Eye).

**POST-GRADUATE COLLEGE**, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Dr. Simson: Diseases of Women. 10.30 A.M., Medical Registrar: Demonstration of Cases in Wards. 12 noon, Dr. Bernstein: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Armour: Operations. Dr. Pritchard: Bacterial Therapy Department. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Dr. Pritchard: Treatment of Infective Processes.

TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 10.30 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12 noon, Mr. T. Gray: Demonstration of Fractures, &c. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. Dr. Pernet: Diseases of the Skin. 5 P.M., Lecture:—Dr. Pritchard: Treatment of Infective Processes.

WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 11 A.M., Mr. Souttar: Demonstration of Minor Operations. 12 noon, Lecture:—Mr. Souttar: Abdominal Diagnosis. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Pardoe: Operations. Mr. B. Harman: Diseases of the Eye. Dr. Simson: Diseases of Women. 5 P.M., Lecture:—Dr. Pritchard: Treatment of Infective Processes.

THURSDAY.—9 A.M., Dr Bernstein: Bacterial Therapy Department. 10.30 A.M., Dr. Simson: Gynæcological Demonstration. 12 noon, Lecture:—Dr. G. Stewart: Neurological Cases. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Armour: Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. T. Grey: Abdominal Pain.

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 12.15 P.M., Lecture:—Dr. Bernstein: Clinical Pathology. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. Dr. Pernet: Diseases of the Skin. 5 P.M., Lecture:—Mr. T. Grey: Abdominal Pain.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Diseases of the Eye. 12 noon, Lecture:—Mr. Souttar: Surgical Anatomy of the Abdomen. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Pardoe: Operations.

**LONDON SCHOOL OF CLINICAL MEDICINE**, Dreadnought Hospital, Greenwich.

MONDAY.—Out-patient Demonstrations:—10 A.M. Dr. Singer: Medical. Mr. H. Curtis: Surgical. 12 noon, Mr. G. N. Biggs: Throat, Nose, and Ear.—2.15 P.M., Mr. W. Turner: Surgery. 3 P.M., Mr. W. Turner: Operations. 3.15 P.M., Sir Dyce Duckworth: Medicine.

TUESDAY.—Out-patient Demonstrations:—10 A.M., Medical. Mr. Cole: Surgical. 12 noon, Dr. H. MacCormac: Skin.—2 P.M., Mr. L. McGavin: Operations. 2.15 P.M., Mr. R. Carling: Surgery. 3.15 P.M., Dr. G. Rankin: Medicine. 4.15 P.M., Mr. R. Lake: Ear and Throat.

WEDNESDAY.—Out-patient Demonstrations: 10 A.M., Medical. Mr. Cecil Rowntree: Surgical. 11 A.M., Mr. R. B. Bickerton: Eye.—2 P.M., Mr. L. V. Cargill or Mr. Choyce: Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.15 P.M., Mr. Cargill: Eye Clinique. 4.30 P.M., Mr. C. C. Choyce: Surgery.

THURSDAY.—Out-patient Demonstrations:—10 A.M., Dr. Singer: Medical. Mr. H. Curtis: Surgical. 12 noon, Mr. G. N. Biggs: Throat, Nose, and Ear.—2 P.M., Mr. R. Carling or Mr. W. Turner: Operations. Dr. A. Davies: Pathological Demonstration. 3.15 P.M., Dr. R. Wells: Medicine.

FRIDAY.—Out-patient Demonstrations:—10 A.M., Medical. Mr. Cole: Surgical. 12 noon, Dr. H. MacCormac: Skin.—2 P.M., Mr. L. McGavin: Operations. 2.15 P.M., Sir John Rose Bradford: Medicine 3.15 P.M., Mr. L. McGavin: Surgery.

SATURDAY.—Out-patient Demonstrations: 10 A.M., Medical. Mr. Cecil Rowntree: Surgical. 11 A.M., Mr. R. B. Bickerton: Eye.—10 A.M., Col. Barry: Radiography.

**NORTH-EAST LONDON POST-GRADUATE COLLEGE**, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10.30 A.M., Surgical Out-patient (Mr. R. Gillespie). 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Nose, Throat, and Ear (Mr. H. D. Gillies). 3 P.M., Medical In-patients (Dr. R. M. Leslie).

TUESDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. Howell Evans); Gynæcological (Dr. A. E. Giles). X Rays and Electrical Methods. 3 P.M., A Demonstration on Auricular Fibrillation (Dr. A. J. Whiting). 4.30 P.M., Lecture:—Dr. Banister: Some Points in the Treatment of Puerperal Sepsis.

WEDNESDAY.—Clinics:—2 P.M., Throat Operations (Mr. Gillies). 2.30 P.M., Children's Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. R. P. Brooks).

THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. E. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson); X Rays and Electrical Methods (Dr. Metcalfe).

FRIDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. R. Gillespie); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. G. P. Chappel).

**LONDON HOSPITAL MEDICAL COLLEGE (UNIVERSITY OF LONDON),** Clinical Theatre, London Hospital, Mile End-road, E.

Course of Lectures on the Neuroses and Psychoses of Children:—
MONDAY.—4.15 P.M., Dr. F. Warner: Description of Children; Types of Childhood.

**HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST,** Brompton, S.W.
WEDNESDAY.—4.30 P.M., Lecture:—Dr. B. Shaw: Gangrene of the Lung.

**THE THROAT HOSPITAL,** Golden-square, W.
MONDAY.—5.15 P.M., Special Demonstration of Selected Cases.
THURSDAY.—5.15 P.M., Clinical Lecture.

**NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC,** Queen-square, Bloomsbury, W.C.
TUESDAY.—3.30 P.M., Clinical Lecture:—Dr. A. Turner: Paraplegia.
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**QUEEN'S HOSPITAL FOR CHILDREN,** Board Room of the Hospital, Hackney-road, N.E.
THURSDAY.—4 P.M., Lecture: Dr. J. P. Parkinson: Difficulties in Diagnosis in Disease in Children.

**CANCER HOSPITAL,** Museum of the Hospital, Brompton, S.W.
Post-Graduate Lectures on the Diagnosis and Treatment of Cancer:—
WEDNESDAY.—6 P.M., Mr. W. E. Miles: The Surgery of Cancer of the Rectum.

**ROYAL EYE HOSPITAL** (LONDON SCHOOL OF OPHTHALMIC SURGERY AND MEDICINE), St. George's-circus, Southwark, S.E.
TUESDAY.—5 P.M., Lecture:—Sir William Collins, K.C.V.O.: The History and Pathology of Cataract.

**ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN,** 49, Leicester-square, W.C.
TUESDAY.—6 P.M., Mr. Kempster: X Rays. Lupus and Rodent Ulcer.
THURSDAY.—6 P.M., Dr. M. Dockrell: Fungous Diseases of the Skin—I., Tinea Circinata; II., Tinea Imbricata; III., Tinea Versicolor; IV., Erythrasma; V., Actinomycosis; VI., Madura Foot.

**ROYAL INSTITUTE OF PUBLIC HEALTH,** Lecture Room of the Institute, 37, Russell-square, W.C.
Course of Instruction for Tuberculosis Officers, School Medical Officers Medical Practitioners, &c.:—
FRIDAY.—5 P.M., The Diagnosis and Treatment of Tuberculosis, &c.—Lecture V.:—Dr. T. N. Kelynack: Tuberculosis in Childhood.

**MANCHESTER HOSPITALS POST-GRADUATE CLINIC.**
MONDAY.—MANCHESTER CHILDREN'S HOSPITAL, Gartside-street.—4.30 P.M., Dr. H. T. Ashby: Rickets.
TUESDAY.—SALFORD ROYAL HOSPITAL—4.30 P.M., Mr. J. B. Maclalpine: Treatment of Cystitis.
WEDNESDAY.—ROYAL INFIRMARY—4.30 P.M., Dr. H. Griffith: Ophthalmoscopic Cases.
THURSDAY.—ANCOATS HOSPITAL—4.30 P.M., Dr. Core: Melæna.
FRIDAY.—ROYAL EYE HOSPITAL—4.30 P.M., Dr. J. G Clegg: Myopia—Staphyloma Posticum.

**ROTUNDA HOSPITAL POST-GRADUATE COURSES,** Dublin.
MONDAY.—10 A.M., Obstetrical Lecture: Postpartum Hæmorrhage (continued). 11 A.M. Examination of Patients and Minor Operations.
TUESDAY.—10 A.M., Major Operations.
WEDNESDAY.—10 A.M., Obstetrical Lecture: Rupture of the Uterus. 11 A.M., Examination of Patients and Minor Operations.
THURSDAY.—10 A.M., Major Operations.
FRIDAY.—10 A.M., Gynæcological Lecture: Special Lecture in Gynæcological Pathology. 11 A.M., Examination of Patients and Minor Operations.

*For further particulars of the above Lectures, &c., see Advertisement Pages.*

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THE LANCET Office, Feb. 4th, 1914.

| Date. | Barometer reduced to Sea Level and 32° F. | Direction of Wind. | Rainfall. | Solar Radiation Vacuo. | Maximum Temp. Shade. | Min. Temp. | Wet Bulb. | Dry Bulb. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|
| Jan. 29 | 30·02 | S.W. | 0·01 | 77 | 53 | 45 | 46 | 47 | Cloudy |
| ,, 30 | 29·95 | S. | 0·02 | 55 | 52 | 47 | 48 | 48 | Overcast |
| ,, 31 | 30·00 | S.W. | ... | 65 | 51 | 45 | 44 | 46 | Fine |
| Feb. 1 | 30·12 | S.W. | ... | 80 | 56 | 49 | 51 | 53 | Cloudy |
| ,, 2 | 30·17 | S.W. | ... | 76 | 53 | 45 | 43 | 45 | Fine |
| ,, 3 | 30·05 | S.W. | ... | 74 | 56 | 43 | 44 | 44 | Fine |
| ,, 4 | 30·13 | S. | ... | 73 | 53 | 44 | 43 | 44 | Fine |

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